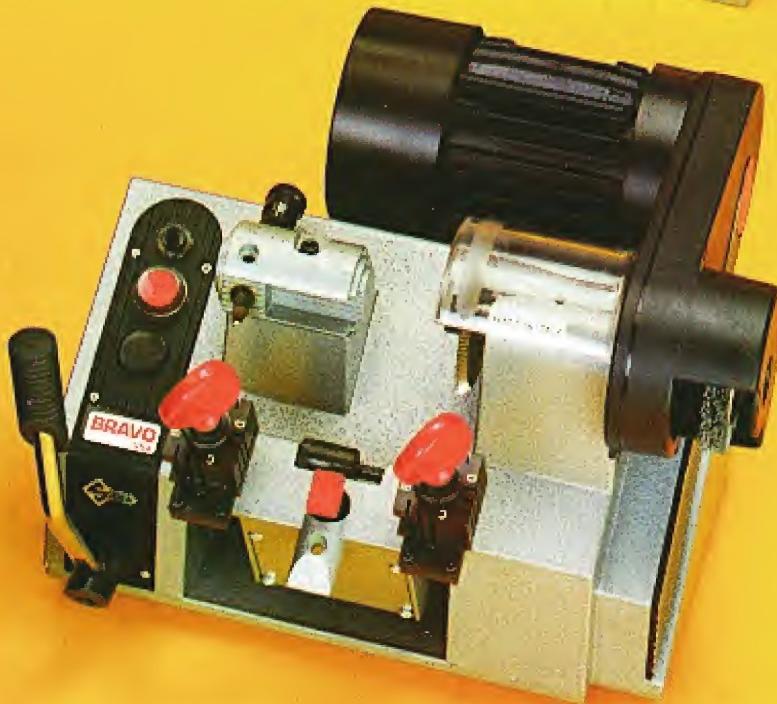


The National Locksmith®

August 1990



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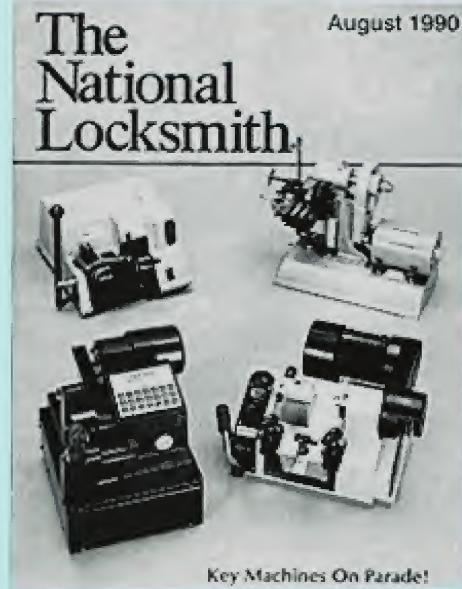
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Key Machines On Parade!

On The Cover

Companies with products featured on our front cover are (clockwise from upper left): ESP Corp., DiMark International, HPC, Inc., and Silca Key Services. (Photo by Bakstad Photographics.)

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Managing Editor Sandy Kucharski
Editorial Assistant Veronica Razzano
Circulation Manager Tracey Brady
Production Consultant Marian Raney
Technical Editor Robert Sieveking
Technical Writers E. Lee Griggs, Ed Hill,
Dale Libby, Joseph Locke, Regis McCafferty,
Dave McOmie, Rick Ohmit, Don O'Shall,
Sara Probasco, Jack Roberts, Shirl Schamp
Advertising Sales Mgr. Thomas Mlodoch
Advertising Sales Asst. Debbie Schertzing
Technical Advisors Richard Bushe,
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Commentary

Expecting The Unexpected

Many months I sit in front of a blank computer screen thinking hard of ideas for a Commentary. This month, however, I am sitting in front of a pad of blank paper instead of my word processor. But ideas are easy to come by this month.

On Friday, June 29 at 8:10 a.m. what has been termed a "microburst" struck our immediate vicinity. A shaft of wind hurled itself at 150 mph toward the business park where our offices are located. The 30 second wind storm hit with the violence of a train wreck.

Our building, along with numerous others, sustained major damage. Early estimates place the damage at six figures. Our roof was largely blown off, an overhead garage door (11 feet tall) was blown right off the hinges; and holes were blown right through our brick walls. Believe it or not, though, we were very fortunate in that none of our staff was in the building at the time. There was one fatality when a young man was crushed in the collapse of a brick wall at a neighboring building. Plus there were several other injuries.

Damages to the business park have been estimated at 10 million dollars. For one week after the storm we were without electricity or phones. At this time, service has still not been restored. However, our contractors are hoping to give us electricity back today.

Next month we will give you a fuller report along with photos of the disaster. In the meantime, I hope not too many of you have been inconvenienced in trying to call here with no answer.

Before I conclude, let me say a word or two about insurance. Previously, I have always thought of insurance as a necessary bill...one step removed from pouring your money down a rat hole. But this has proven to me that you never know when disaster may strike. Who expects a 150 mph downdraft to demolish a neighborhood?

Good insurance, not just plain old insurance is a *must* for everyone. You can't afford to be without it. Please give it some thought right now. It's the thing you can do to prepare for the unexpected.



Marc Goldsby
Editor/Publisher

August 5

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and lengths. Please address your comments, praise, or criticism to: Editor, **The National Locksmith**, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Association Protests Supplier Packaging

Dear Marc:

At a recent meeting, the membership of the Green Mountain Locksmiths Association voted to send letters of protest to those suppliers of the locksmith trade which utilize non-degradable packing materials for their shipments. We strongly encourage other individual locksmiths and associations to do likewise.

Vermont has a strong tradition of protecting our environment. We feel if more in the trade would let our suppliers know that we don't appreciate these packing materials (specifically the polystyrene "peanuts" and the like), then we could make a real difference in saving the environment for our heirs. A policy of favoring suppliers using "environmentally-friendly" packing, such as shredded recycled paper, will get the message through to the others.

Dick Grant
President, GMLA, Vermont

Playful Pooch Penetrates A Lockout

Dear Marc:

Everybody that enters my locksmith shop has a story about being locked in or locked out. Many stories are redundant but the teller thinks his or her tale is unique. The other day a mailman told me one that I hadn't heard before.

It seems that he had a vehicle with a pushbutton locking mechanism and a playful dog which rode with him. One weekend day last winter he stopped to toss a letter of his own in a mailbox. It was cold and he was just stepping a few feet away from his vehicle so he left the engine running.

His curious dog started pawing the window and happened to hit the locking button. So there's the mailman standing outside in the cold with his dog locked in a running vehicle. Along comes a person with a coat hanger. "No problem," the stranger said.

The mailman got the coat hanger into the correct position and was about to pull the button and unlock his vehicle. His dog, however, had another idea.

The dog thought his master was playing and promptly removed the hanger. Several times the master hooked the button. Every success was negated by the dog.

Finally the man decided on a new strategy. The stranger would do the unlocking while the master would

entertain the dog on the other side of the vehicle.

The plan worked. Jerry LaPierre
Maine

Do U-Change Locks Really Hurt Business?

Dear Marc:

I have been in the locksmith trade for 2½ years. During this time, I have been called upon to service the U-Change locks quite often. I realize that U-Change cuts the locksmith business, my question is what are the ethics we must stand by? I have recently been contracted by U-Change Lock Co. to install the U-Change in two large chain stores. Where do I stand?

There is quite a bit of service work done on these locks, other than just changing the combination. I have been called out to re-do, re-combine, unjam and to clean a jammed U-Change lock because the customer used graphite on it. (Graphite does not work too well. Because of the mushroom head design on the button pins of these locks, the graphite jams these pins.)

The money we lose on the rekeying of these locks should even out for the servicing there is to be done. Again where do I stand?

Rick Sullivan
Texas

Editor's Note: Let's throw your questions over to your fellow locksmiths. What do you folks think about this situation?



[Click here for more information](#)

ASP - Your Auto Service Center for the World

Tradesman Strikes Against Impromptu Car Openers

Dear Marc:

I have been reading in your column about the police department, tow trucks and different people with Slim Jims. I know it might sound a little radical, but Cesar Chavez boycotts grapes, so why can't we as a nation of locksmiths strike against tow trucks, police, etc. We could if everybody stuck together and turned it around to our benefit.

Send out a letter to all illegal parties saying that is they try to enter a car but fail and we find out about it, then the locksmith will not go out to the call. We could demand they tow the car to the locksmith and pay the cost of \$100 instead of the customer. If the party involved has been notified of this arrangement, then I think they would be putting the customer in jeopardy and could be sued for his action by the customer.

The tow truck has the privilege of towing the car to the locksmith for his pay or just calling a locksmith. This would work and we have the means of communication and think of what it would do for our business in the future if we all stuck together.

There doesn't seem to be anyway to pass a law to protect us or the customer, so why can't we pass our own law to like the unions do. It is something to think about and I for one, would back this type of action to the fullest.

Jim Alford
California

Private Company Produces Car Tools

Dear Marc:

This letter is written to voice my feelings about a tool company that makes a tool for the automotive mechanic and the general public. There is a January 1990 savings brochure ad that seems to suggest that our profession is still thought of as a bunch of tinkers who, as a group are not respected.

It seems ironic that the automotive industry, law enforcement and others scream about security and the political establishment will not move to outlaw tools that make car theft easy. This inaction makes available to John Q. Public a way to become a quasi-locksmith on automobiles.

My fear is that before long, John Q. Public will be able to buy any locksmith tool, key machine or whatever and we

as locksmiths will be right back to going from door to door like the old time knife sharpener.

Jim Luker
Louisiana

Norwegian Locksmith's Business Perils

Dear Marc:

My cousin Sigmund Jonassen, works as a locksmith in Sandnes, Norway, and one day was busy changing the locks on a suite of offices on the seventh floor of a downtown business building. As will sometimes happen, he found himself in need of a lavatory quickly. Near the end of the hallway was a public restroom.

After washing his hands, he turned to the door door to leave and found the doorknob wouldn't turn. Naturally he wrestled it about but it would not give. As he was standing there, he heard someone in the hallway so he shouted to them. They tried the door from the outside with the same results but told my cousin not to worry as there was a locksmith in the building somewhere and they would go find him. Very reluctantly, he told them who he was and he would find a way out.

(Continued on page 89)



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Guest Editorial

by Jon Payne
Chairman, Legislative Affairs
Committee, ALOA

In response to Marc Goldberg's Commentary opposing ALOA's proposal for a federal law to register locksmiths, I would like to point out that ALOA is a member driven organization as a result of member input, as well as input from various other leaders in the industry.

ALOA deliberately informed the trade publications of the idea of a federal law, so that it could be debated openly in the locksmith industry and if it turns out to be "a really bad idea" as you say, then it will die a quick death. However the locksmiths of the nation will decide the fate of the law.

This proposed bill is simply one of locksmith registration or a locksmith permit. To be a locksmith, and possess locksmith tools, a person would need to obtain a federal permit and you could not obtain a permit if you had ever been convicted of a felony or a crime involving an act of intentional dishonesty or moral turpitude in any court, unless officially pardoned.

As we all know, any person can become a locksmith in this country simply by deciding for themselves that they are one. If you ask John Q. Public what it takes to become a locksmith, he will respond with "you have to be checked out by the police." In reality, this is not true, since it is almost impossible to submit a potential employee to a police check as a qualification of employment. If I unwittingly hire a "bad" locksmith, I could be sued if he committed an illegal act while in my employment. This is a catch-22 situation.

One benefit of this federal registration is that locksmith employers will have the peace of mind knowing that employees are free of criminal convictions. A secondary benefit is the public's peace of mind in knowing that the person changing their locks did not just get out of jail.

There are many bills being introduced

by other industries that are slowly eating away at the locksmith industry. The electrical contractors constantly introduce legislation that seeks to restrict non-electricians from doing any type of electrical work, such as burglar alarms and electric locks and the burglar alarm industry is equally as guilty in seeking to restrict others from installing burglar alarms.

ALOA found the industry to be at a significant disadvantage when we attempt to fight such legislation because the locksmith industry has virtually no licensing at all, which leads to being able to modify or amend such encroaching legislation with the phrase "except licensed locksmiths." Federal registration would then be a useful weapon in fighting unfriendly legislation.

There are many local locksmith associations around the country that are seeking to introduce local locksmith licensing laws. What are the reasons for this effort? It is because the local associations see a need for it in their communities. These state initiatives, while common in purpose, are radically different in content while this potential difference between state laws could become quite confusing and very difficult to keep up with as time goes on.

Many locksmith companies and distributors operate across state boundaries or even nationally and they would have to devote a significant amount of time to insuring compliance with local and state laws and that of uniformity. There would be little need for any state laws with a federal permit in place and one law would be easier to comply with than 50 different laws. The local locksmith associations could then abandon the expensive task of pursuing the passage of local laws.

Locksmith licensing laws being introduced by non-locksmiths, are quite restrictive since it is impossible to generalize the motivations behind these bills except to say that the persons introducing the bill perceived it as a solution to a problem. Frequently the

locksmith industry is left with little time to react and overturn detrimental legislation which leads to the need for minimal state laws, since the locksmiths would already be registered with a "higher authority" than the state government.

There is precedent at the state level for this type of federal criminal background check approach, which can be seen in California, where it requires a person must be clear of any misdemeanor conviction for three years or felony conviction for seven years to be eligible for a locksmith permit. There is also ample precedent in both state and federal laws for excluding felons from certain occupations as long as the conviction is relevant to the occupation. For example, a conviction of "drunk and disorderly" might not be considered detrimental when applying for a locksmith permit, while a conviction of "breaking and entering" would be considered against the locksmith. The later is relevant to the occupation of locksmithing.

I would like to counter the specific points made in the Commentary. Marc equated the ATL law, that prevents criminals from getting a license to sell guns, to "gun control." The Bureau of Alcohol, Tobacco and Firearms, within the Treasury Department, has a system in place that checks criminal records at a federal or state level for retailers seeking a license to sell firearms and this 22 year old system is not designed as a gun control measure, but rather, to seek elimination of criminals from the legitimate retail firearms industry.

By mentioning the medical profession's inability to get rid of "bad doctors," this statement implies that any effort at self regulation is doomed to failure. To use the example, imagine how bad things could become in the medical profession if there was no regulation at all.

There will be a fee for this registration of \$30 for a license to retail guns, since fees are necessary to pay for the costs of

Continued on page 89

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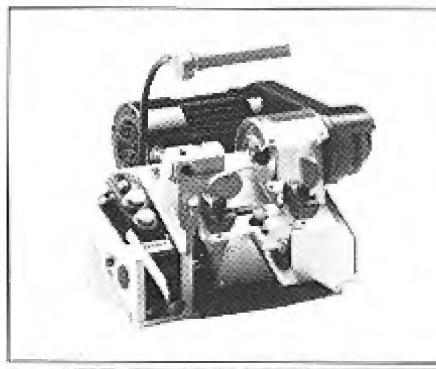
HPC Laserpoint



First Prize

This is HPC's ultimate key duplicator for high security keys, BMW, Mercedes, DOM, Kaba, Volvo and others. Laserpoint is heavy duty lever operated, and has easy adjustable cutters and tracers.

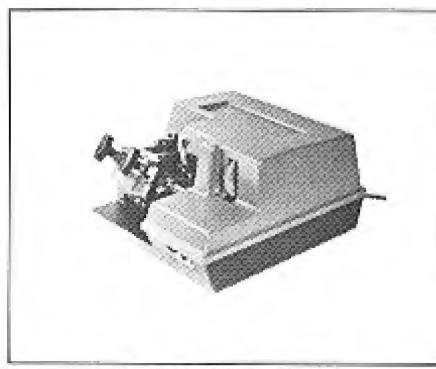
Silca Bravo USA



Second Prize

Locksmith designed, the Silca Bravo USA is a quality semi-automatic duplicator. Four-way jaws hold even the smallest keys as this. One of the most accurate key machines on the market.

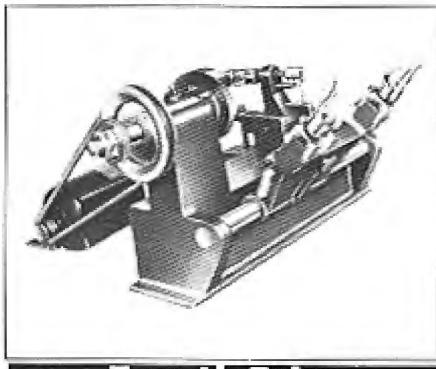
ESP 660



Third Prize

The model 660 key machine can be used for manual cutting or, with the flip of a switch, it will cut keys automatically. It is designed to accommodate large head keys such as hotel and foreign auto blanks.

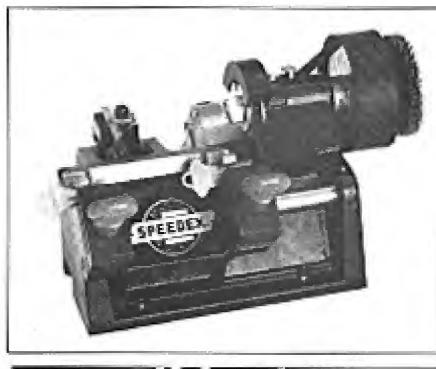
Belsaw 200



Fourth Prize

Duplicate, cut by code, cut flat steel keys. Complete machine with motor, three cutters, guides, and instructions. Built-in micrometer.

HPC 9120

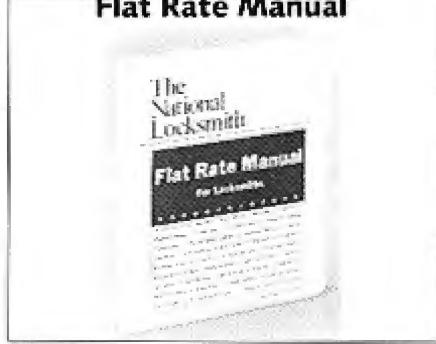


Fifth Prize

HPC's newest and most compact key cutting machine features reversible jaws. Double-sided copy dog cuts flat steel and safety deposit keys and has softy brush. Excellent versatile machine.

\$100 Cash PLUS

Flat Rate Manual



Sixth Prize

\$100.00 in cash will brighten your day! So will the *Flat Rate Manual for Locksmiths*. The manual will help you price your services for profit. You won't have to guess how to price ever again.

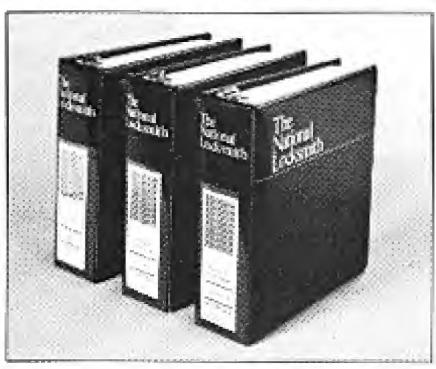
***** General Code Book Set (NGCB)



Seventh Prize

These three books contain 450,000 codes covering domestic lock and automobile codes.

***** Padlock Code Book Set (NPCB)



Eighth Prize

These three volumes offer 462,000 covering Dudley, American (Junkunc), Master and Yale.

***** Foreign Code Book Set (NFCB)



Ninth Prize

This two volume set holds 432,000 codes for the complete variety of foreign codes, from Alpha Romeo to Yugo.

Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sieveking

Congratulations to all those that find their Technitips printed here this month. Your participation is appreciated by myself, and your fellow locksmiths. Each of the authors you see represented in this month's Technitips column has grown, in their importance to the industry, by giving their best ideas as aid to their fellow craftsmen.

August passes, and with it the number of months remaining to enter this year's competition is diminished by "one." Another VATS decoder/interrogator is awarded, and that leaves only four more that will be won this year. How quickly the year passes us by, if we allow it. Though I have seen some fantastically clever and imaginative solutions to some common locksmith problems printed already this year, there is still some room left at the top. Your tip could be the one that clearly stands out above all the rest.

How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will not be eligible! So get busy and send in your tips today! You may win cash, merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1990? Enter today! It's a lot easier than you think!

Win a VATS Decoder From All-Lock!

Each month, All-Lock will award one of their A-7000 VATS Decoders to the best automotive Technitip submitted this month. If you would like a chance to win a free decoder from All-Lock, simply submit your automotive tip exclusively to *The National Locksmith*. Tips submitted to other publications cannot be considered.

All-Lock's A-7000 makes it easy to diagnose system failures, service the column and select the correct key blank. This sophisticated tool is easy to use and is completely portable. Long wire leads are easy to use in cramped automotive situations.

Submit your tip, and win today!



The world is full of people with ideas that "would have-could have-should have" won the top honors. The sad truth is that they didn't take the time to act. Their names are lost in the great sea of non-doers, dreamers, that study the successes of others and plan for the day that they will set the world on fire with their great invention or trick.

Take the time to write up your Technitip in a way that someone else can understand how to duplicate it. Give an illustration or two of what

makes it work, and mail it today. You could be cutting keys on a new key machine next year, as a result of your ingenuity and action. Then again you could still be dreaming about that fantastic idea that "could have-should have-would have" won that new key machine, as you read the list of winners in the January issue.

Technitips is where the action is. Act now. Send me your best Technitip. I'd enjoy reading it and possibly finding a place for it in this year's contest.

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker, decal and patch. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal, patch and a Locksmith Cap. Plus, you may win one of the annual prizes.

August's Best Tip

A few days ago, I found myself in the field with a deadbolt that I could pick toward the locking direction but it refused to pick in the unlocking direction. I did not have my plug spinner with me at the time. After a futile attempt at picking the lock in the unlocking direction, I noticed a rubber band lying on the floor. The idea of using the rubber band and tension wrench together, as a plug spinner, flashed through my mind.

I picked the lock in the locking

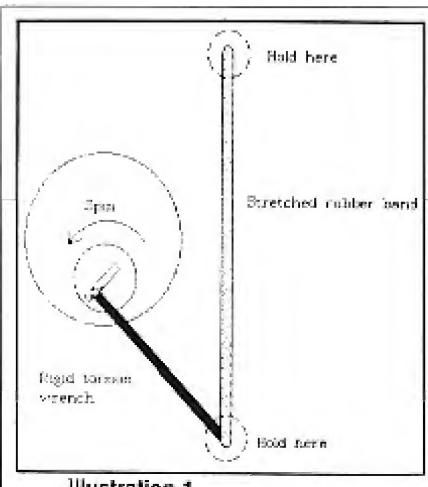


Illustration 1

direction, inserted a rigid tension wrench into the plug, hooked the rubber band over the end of the tension wrench as you see in illustration one, and let it fly. It spun so fast, and with such force, that it unlocked the deadbolt. This Technitip works so well that I might give up my old plug spinner.

T.R. Taylor
Colorado

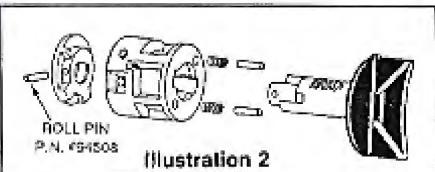
Automotive Tip of the Month

This tip is the winner of the All-Lock A-7000 VATS Decoder. All-Lock will award a decoder to the best automotive tip each month of the year.

If you must work on one of the new double-sided Chrysler ignition locks that has the drive cam "staked" in place, this Technitip will be important to you.

If you have a "sealed" Chrysler ignition lock, and it must be serviced before taking it apart, drill a hole through a cam and plug, as you would find on the serviceable type ignitions. This will ensure that the hole for the drive pin will be properly aligned with the ignition reassembled. See a serviceable ignition, for the proper placement of the hole. Briggs & Stratton part number 94508 is the roll pin that is used on the serviceable type ignitions.

Once the cam has been drilled, use a Dremmel motor tool or die grinder to remove the riveted portion of the ignition and free the drive cam. Remove the lock plug and service as necessary. Reassemble the plug into the lock case and secure the cam to the plug using the B&S roll pin. (See illustration 2.) The



roll pin (P.N. #94508) is a part of the new Chrysler double bitted service kit.

R. Lazich
Wisconsin

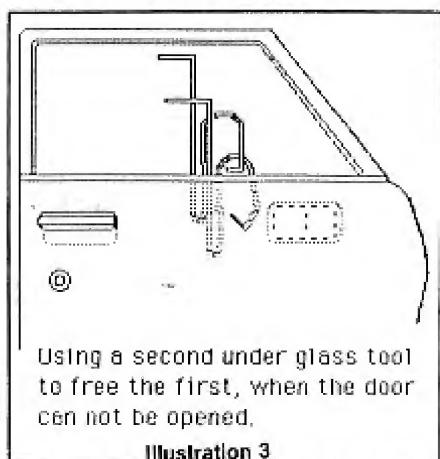
I'm sure you will find this Technitip handy if you do a lot of car opening service. The other day I had the unhappy experience of unlocking a relatively late model auto with my "under glass" tool, only to find that the latch linkage from the outside handle had been disconnected by some well meaning

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but unprofessional Samaritan. This placed me in a precarious position, as the under glass tool I needed could not be removed to unlock the opposite door.

After a little thought, I decided to use a second under glass tool (for thin doors) to open a gap in the weather strip inside the car, so I could remove my first tool. (*See illustration 3.*) The



second tool, inserted behind the first, opened the inside rubber mounting and both tools were retrieved with no problem. I hope this Technitip helps another locksmith, if he finds himself in the same precarious position.

Leland Bishop
California

This Technitip will make opening those cars with the "black-out" side window tint a little easier. If you have the opportunity to open one of these "no-peek" tint jobs, you will know how hard it is to see what you're doing as you work a sliding lock tool or button jimmy in the door.

My Technitip is to get one of those 5" make-up mirrors that are mounted to a flexible shaft, with a weighted flat plate for a stand. Glue magnetic tape or sign material to the bottom of the stand so the base will adhere to the hood of the car. The front glass will not be tinted. State law prohibits tinting the front glass in most states. Place the mirror on the hood of the car, and adjust it for the best view of the button as you work from the outside to the door. This Tip makes the job a lot faster.

W.W. Thompson
Georgia

This Technitip may save a call back on a deadbolt installation, caused by seasonal changes, expansion and contraction of the door or jamb. When I

Bevel the edges of the bolt.
This prevents the bolt from catching on the strike.

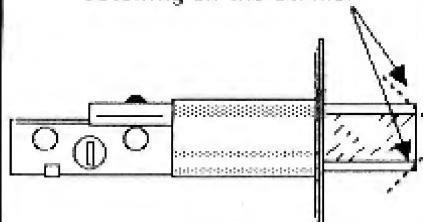


Illustration 4

install a deadbolt in a new home, I always "chamfer or bevel" the edges of the bolt face about $1/16"$, as you see in

illustration four. This allows the bolt to guide into the strike, instead of blocking because of a slight misalignment. Be careful to locate the strike accurately, but you will find that the beveled edges will nearly eliminate warranty call backs caused by seasonal movement of the building.

Michael E. Shearer
Illinois

This is my first Technitip, but I hope you like it. It worked for me and I feel that it is a good method of making an across-the-car opening tool from



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materials around the shop.

This tool needed to be strong, so I decided that the spring steel in the non-telescope auto antennas would be just the ticket. I selected three antennas that were not tapered from tip to base, and cut off the threaded bases and top balls from each. The pieces needed to be joined in some way, if they were to reach across the car, so I made couplers from a piece of $\frac{1}{4}$ " steel rod.

I chose a threading die that would cut a full thread into the antenna material. Holding the antennas in a vise, I threaded both ends of one antenna and one end of each of the remaining two antennas. The $\frac{1}{4}$ " rod was drilled through the center, as you see in illustration five and tapped to match the threads on the antennas. A 1" long connector is plenty for the size of the antenna wire. To make the tool maneuverable, a round finger loop was

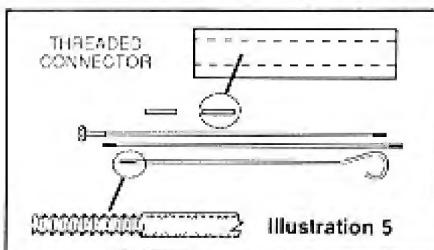


Illustration 5

fashioned in the end of one single threaded antenna. To give the working end of the tool a non slip tip, a rubber lock button from an old Volkswagen was screwed over the end of the other single-threaded antenna.

The tool breaks down easily, to three 30" pieces, but can be assembled to form an across-the-car tool that is strong enough to operate electric lock actuators or slide buttons with ease.

To improve the performance of the tool in tight doors, and to protect the edges of the side glass on hard top cars, a piece of PVC plastic water pipe is slid over the tool before the tool is inserted into the wedged door. This way the metal of the opening tool never touches the edge of the glass and the tightness of the door can't pinch or bind the tool as it is being manipulated across the car.

An additional benefit of the antenna material is that the stainless plating of the tool keeps it looking great because it won't rust. You can reverse the tool, to use the hook end to retrieve keys from inside the car.

Vickey Marginsen
Massachusetts

This little tip is for the BMW autos with the factory alarm system. When opening the car, the alarm will sound. The wailing of the alarm can be rather troublesome if you don't have a key to silence it. The tip here is to remove the "#2 fuse" from the fuse panel for 30 seconds. The alarm will lose its memory and can be reprogrammed with a new access code using the instructions in the owner's manual. By reprogramming the access code to a new combination, the alarm can be silenced. This system takes very little time once you learn the programming sequence.

Jerry Horn
California

This Techntip concerns the Mazda ignitions found on late model autos labeled "SL-10." The SL-10 lock cylinder plug is removed out the rear of the lock case. Replacement can be a real struggle if you are trying to insert the plug without a key to keep the wafers and springs captive as it is slid into place.

The plug retainer, at the front of the plug, is extended by the blade of the key so the key must be modified as you

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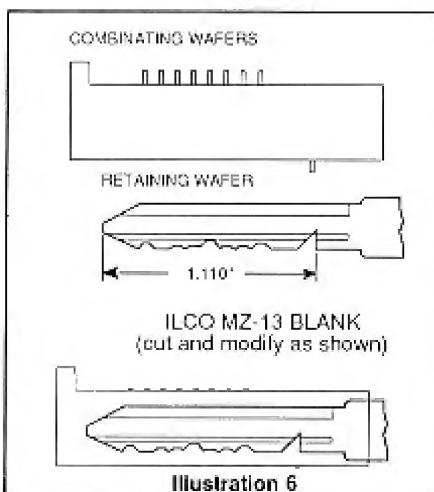


Illustration 6

see in illustration six. The "V" notch is cut 1.110" from the tip of the key to accommodate the retainer. This modified key will allow the plug retainer to be compressed into the plug as it is inserted into the lock body.

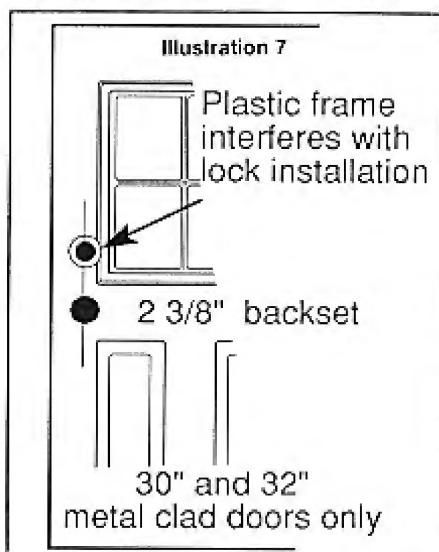
Cut the blank to the proper combination on one side only, then notch the blade as you see in the illustration. When inserted into the plug, the blank must extend at least $\frac{1}{8}$ " out the front of the plug so it can be easily removed after the plug has been installed. This special blank will keep all the wafers captive and under control, saving you a lot of time and sweat. The price of a blank

key is inconsequential, for the savings in convenience this Technitip will give you.

I struggled with a couple of these before I realized how simple the solution was. I hope I am saving someone a little of the sweat and frustration with this tip.

Victor M. Szilard
California

This Technitip concerns the installation of a deadbolt in a metal clad door having a narrow stile, with glass.



The margin around the glass portion of the 30" and 32" door is not wide enough to accommodate even a 2 $\frac{3}{8}$ " backset deadbolt. The plastic frame around the glass extends into the area that must be occupied by the body of the lock, as seen in illustration seven. To solve this problem, I have found that a hole saw the diameter of the lock body, can be used to cut a half moon shape cut-out from the plastic frame to allow the lock to be easily installed.

Drill a $\frac{1}{4}$ " pilot hole in the door, at the correct backset for the lock you are installing. Then, using a 2" hole saw (or one the diameter of the lock you are installing), carefully insert the $\frac{1}{4}$ " pilot drill into the predrilled pilot hole and saw through the plastic window frame. Be careful not to scratch the metal skin of the door. A piece of sheet metal can be used to protect the door skin if you feel it is necessary.

Remove the 2" hole saw and switch to the correct size for the deadbolt you are installing. Complete the installation as you would normally. Remove any rough edges on the plastic frame with a piece of fine sandpaper before installing the lock.

Bruno Golowski
New Jersey

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Newsmakers

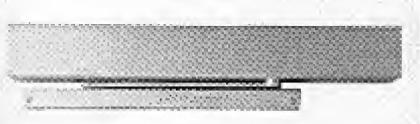
New Products and Industry News

Norton Powerplus Offers Reliable Door Control

Norton Door Controls has introduced the PowerPlus door closer for maximum flexibility in responding to the handicapped requirements.

Based on the Norton multi-sized 7500 Series closer, the PowerPlus adds powered opening capability to the reliable door control provided by all Norton hydraulic surface closers.

The closer's electric pump will automatically open a door when



activated by scanner, push button or radio frequency signal. It can also be activated by movement of the door out of its frame by less than $\frac{1}{2}$ ".

The PowerPlus can also be ordered in PowerAssist version factory-set to reduce the manual force required for door opening to less than two pounds in most instances.

Circle 358 on Rapid Reply

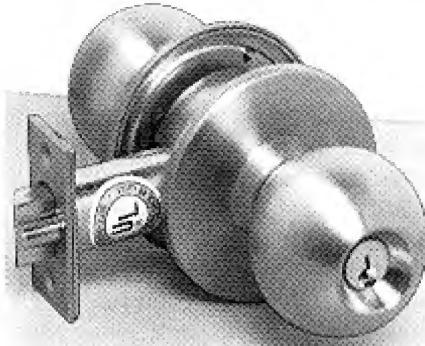
Trans-Atlantic's Cylindrical Locksets

Available from Trans-Atlantic Company is the SV Series of standard duty cylindrical locksets that is the most versatile ANSI Grade Two cylindrical lock currently available.

The locksets offer unmatched interchangeability with the standard variable

six pin cylinder systems of three major cylinder manufacturers, Lori, Ilco-Unican, and A.W.I., plus high security cylinders like Medico and Kaba.

The knobs and levers are available in a wide range of popular commercial functions and finishes.



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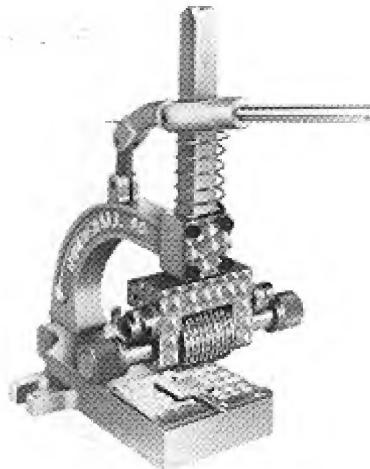
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Numberall's Specialized Stamping Equipment

Numberall Stamp and Tool Co., Inc. features equipment that is ideal for stamping keys or tags of all sizes and shapes and allows for in-house stamping.

The stamping equipment has easy set-ups, neat legible impressions, labor saving and is cost efficient when compared to individual hand stamps.



Circle 360 on Rapid Reply

Harrison Electronic's New Pinswitch

Harrison Electronic's 7850 VFM, vertical flange mount pinswitch is engineered for use in special automotive and security applications such as trucks, utility vehicles, step-vans, RVs and enclosed trailers.



The 7850 VFM is also engineered for interior and exterior storage compartments, tool boxes, and where under-hood space is limited.

The unique design of the 7850 VFM helps solve the most difficult automotive, sport and utility alarm installation problems.

Circle 361 on Rapid Reply

Vigilante's Keyless Fire Exit Kit

The new fire exit kit from Vigilante Burglar Bars, Inc. can be added to any Vigilante Window Bar to allow keyless fire exit in emergency cases.

The add-on kit installs in minutes and comes with a swing hinge assembly and tamperproof lock box and does not require key usage to open from the inside.

To open, in an emergency, open the cover, reach into the box, release the lock and it is opened in seconds.



Circle 362 on Rapid Reply

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National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

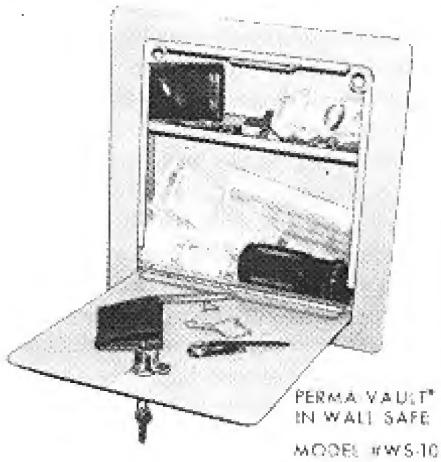
www.laserkey.com

Bonafide Products' Perma-Vault Safe

Bonafide Products, Inc. introduces the Perma-Vault in-wall safe to use in homes, offices, hotels and hospitals and provides 710" of storage space within its 14½"×3½" interior.

The safe is designed to fit between standard wall studs while the flush door is constructed of heavy 12 gauge steel with a concealed, welded hinge for added security. When it is open, the door acts as a shelf for added convenience.

The Perma-Vault safe is equipped with a Medeco UL approved locking



system and is finished with a handsome, ovenbaked, stippled beige finish. When installed, the Perma-Vault safe can be completely concealed by hanging a picture over the flush surface.

Circle 366 on Rapid Reply

New York School Closes Its Doors

The New York School of locksmithing or the National School of locksmithing and alarms, is discontinuing enrolling students in protest to federal regulations holding accredited trade schools liable as a recipient if a graduate defaults on a student loan.

The sanctions placed upon schools with high school default rates, include discontinuance of eligibility to administrate the student loan programs. The two exceptions to these regulations are colleges and universities.

The New York School closed its doors to the general public on June 30 and all classes were completed on June 27. The school will continue to be manned until November 30 during Tuesday, Wednesday and Thursday from 9-1 p.m. Eastern time.

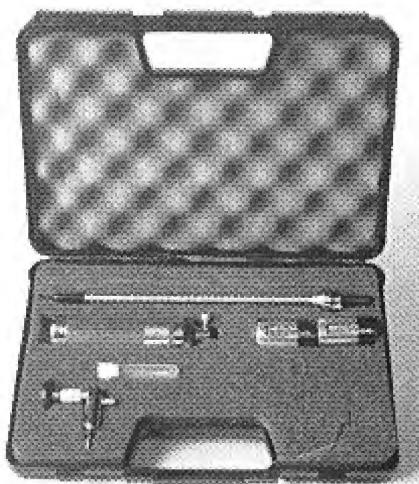
Circle 365 on Rapid Reply

MDS Develops Portable Focusing Borescope

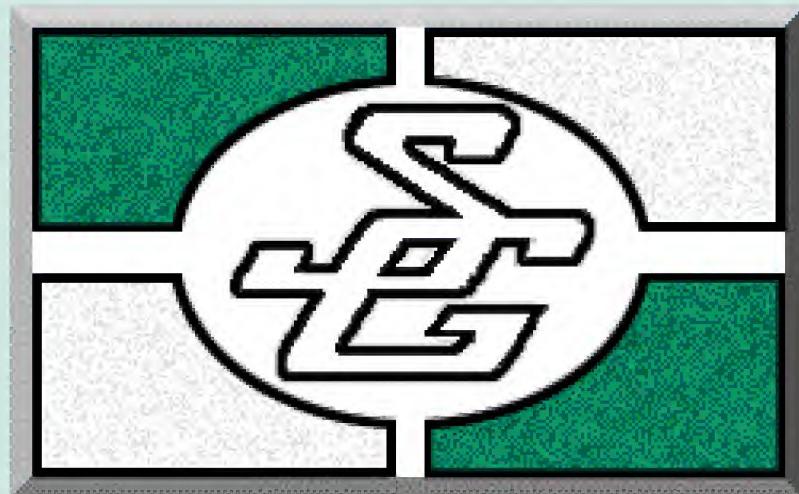
An economical, completely portable, focusing borescope has been developed by MDS Incorporated.

Sharp, clear undistorted magnified mirror images of inspection areas are provided with a series of optical side wall probes.

A variable light control on the "C" cell size power handle assures the user of maximum illumination in darkened cavities.



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Circle 363 on Rapid Reply

American Lock's Inventory Software

American Lock & Supply's Inventory module of its business management software program interfaces with the previously-released software of the monthly-updated price checking module.

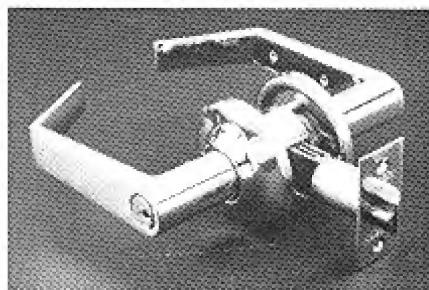
Designed specifically for locksmiths and other security businesses, the inventory module will tabulate inventory by item, in units and dollars, record product location and sales history and print a variety of reports, product identification labels and price tickets to help manage inventory.

When entering all products received and sold, into a PC-compatible system, the user is able to instantaneously review every item on-hand and on-order in units and dollars.

Circle 326 on Rapid Reply

Falcon Lock's Installation Products

Falcon Lock introduces four new products ideally suited for diverse installation requirements.



Falcon's new H series interconnected locks offer both security and cost efficiency in a dual purpose lock and lock functions range from it being a latchset/deadlock, an entrance door lock or a hotel/motel lock.

Falcon's F Series, key-in-lever, key-in-knob locksets and latchsets, provide security for light commercial construction and is available in two popular knob and lever trim designs.

Falcon's G Series lever locksets and latchsets are available for light commercial applications where handicapped requirements must be considered.

The N Series locksets and latchsets are constructed of the highest quality materials offering both security and aesthetics and is available in two knob trim designs.

Circle 327 on Rapid Reply

Detex Corporation Offers Cylinder Switches Line

Detex Corporation introduces a complete line of security control cylinder switches, providing a maximum level of control over door security.

The switches are in attractive, architecturally compatible housings, and are suited to a range of environments from retail establishments to office and industrial facilities. They can be used individually or with exit alarms, remote indicating panels, electric locks and electric strikes.



The new CS-930 Slave Alarm is designed for use as a remote alarm located up to 5,000 feet from a primary alarm.

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HPC's Laserpoint

"Simple mathematics will show that at an average price for keys in the \$20 to \$30 range, the machine can easily pay for itself."



Send your lock and key questions to Jack Roberts,
The National Locksmith,
1533 Burgundy Parkway,
Streamwood, IL 60101

by Jack Roberts

In recent years we have seen the introduction of more and more automobiles, particularly those from European countries with high security locking systems which require special equipment for key duplication. The sticker price of many of these automobiles certainly limits the number of them on the roads and highways of

America, and to an extent, puts most of them in the larger metropolitan areas or in affluent suburbia.

Us country boys, do encounter these exotic pieces occasionally, and we will see more of them in the months and years ahead. List prices of duplication equipment for these keys usually have the same "sticker shock" effect that many of us get when looking at the price of the automobile. These things can cost big bucks, and unfortunately, there just isn't one machine that will cut all the keys that we may see now or in the future.

The folks at HPC, Inc., with their continuing efforts to provide tools,

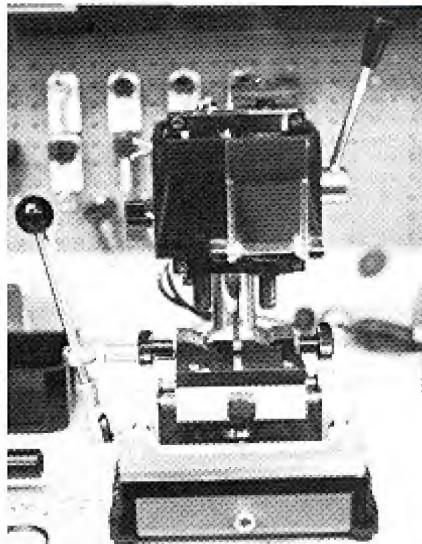
equipment and service to the locksmith, have met the cost and versatility problem of high security key duplication with the introduction of the LPA-100 Laserpoint key machine. (See photograph 1.) The Laserpoint is several hundred dollars less than similar type equipment yet it has good capabilities and features which we will examine thoroughly in this review.

Consideration for the outlay of this kind of money requires study to determine the potential return on investment and the total expected value of the equipment to your overall operation. Leasing plans are available which make ownership a lot easier on

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1. The LPA-100 Laserpoint key machine.

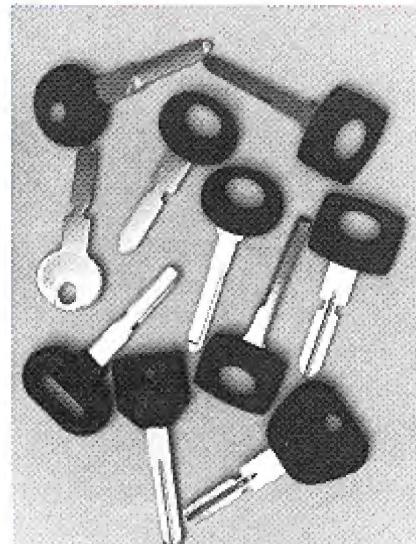
the old bank account and should be included in your deliberations.

A study of motor vehicle registrations in your area for the type automobiles utilizing high security systems would be beneficial in your considerations to enter the lucrative field of these automotive keys. High security key blanks (which can be duplicated on the LPA-100) are available for the following automobiles (*see photograph 2*): Alfa Romeo, BMW, Bavaria, Infiniti, Lancia, Lexus, Mercedes, Volvo, and SAAB.

You should also take into account the potential your shop may have for the duplication of high security keys other than automotive. These would include DOM, Kaba, Keso, Duo, Bell, and many other lesser known type keys. (*See photograph 3*) Keyblanks are readily available through your locksmith wholesaler. Milling capabilities further expand the uses that can be found for this type of machine.

Simple mathematics will show that at an average price for keys in the \$20 to \$30 range (depending on your section of the country) at four or five keys per week will easily cover the cost of blanks and buying and leasing. Although some people take exception to the prices charged by locksmiths for high tech keys, since key blanks average about \$1.50 each, significance must be given to the high cost of the machine, the volume that can be expected and the time involved in cutting the key.

Cutter and tracer changes, machine set-up and adjustment for different types of keys does take time and time is one of the items for which we are paid. The development of skills required for the operation of this type of equipment also takes time, and this must be

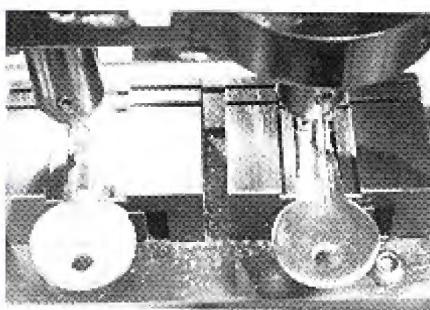


2. High security key blanks available for various automobiles.

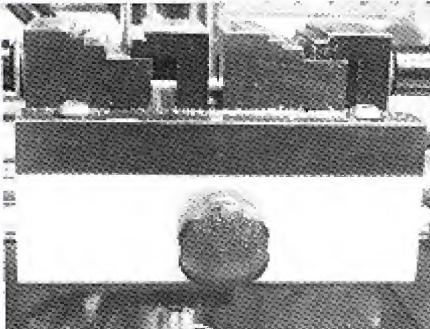
considered.

To assist you in your thoughts of high security duplication equipment, let's take a look at the Laserpoint, LPA-100. This is a vertical milling-drilling machine that utilizes two adjustable jaws or vises, mounted on a carriage block which operates in the X-Y axis (left to right, front to back). They operate on oilite bearings moving on steel shafts stationed between the front and rear and the left and right pillow blocks. (*See photograph 4*.)

Movement in the X-Y axis is controlled by a free flowing handle assembly (*see photograph 5*) mounted on the left side of the machine, which easily facilitates the tracing of the squiggles and wiggles so often found on



3. Duplication process for high security keys.



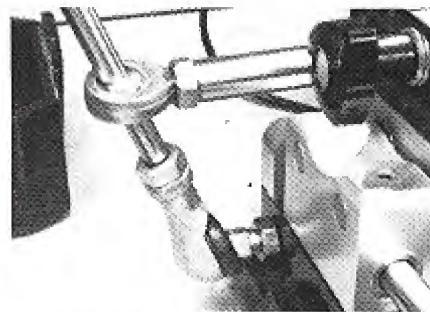
4. Two adjustable jaws operate on oilite bearings.

these keys.

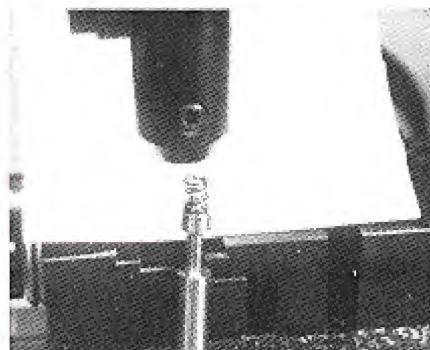
Z axis (vertical) motion of the tracer/cutter heads is controlled by a handle on the right side of the machine. Movement in the X and Z axis can be locked in any position by the use of easy grip locking knobs. A universal double-ended tracer can be reversed for milling or drilling.

When the Laserpoint is used for drilling dimple type keys, a small spring is placed on the end of the tracer before it is inserted into the tracer arbor. (*See photograph 6*.) This allows the tracer to come into contact with the pattern key before the drilling cutter contacts the blank and provides spring action for the Z motion handle. (The tracer spring is not used when the machine is employed for milling operations such as 2 track, 4 track, etc.)

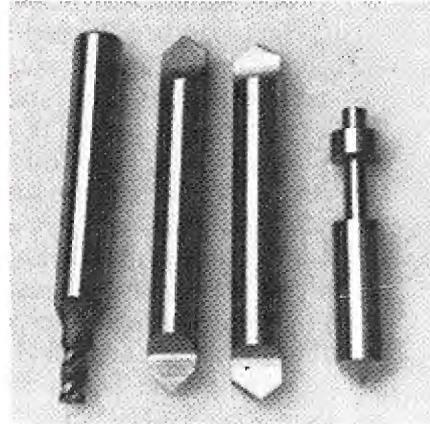
A milling cutter and two double end drilling cutters (*see photograph 7*) are



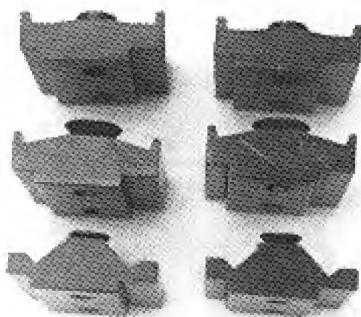
5. Free flowing handle assembly controls movement in the X-Y axis.



6. A small spring is placed on the end of the tracer.



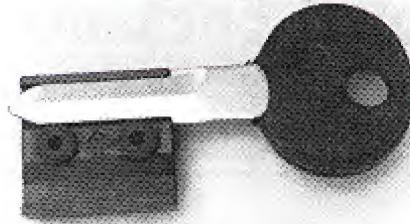
7. A milling cutter and two double end drilling cutters.

**8. Special adaptors for dimple style keys.**

furnished with the machine which gives the user a choice of four drilling angles: 95, 105, 110 and 120 degrees as required for the various types of dimple style keys.

The 95 degree cutter will be used on most of the dimple type keys found in the USA such as Kaba, Keso, DOM and Bavaria. The 105 degree cutter is used for Lancia. Special adaptors for dimple style keys are furnished with the Laserpoint; i.e. 5 degrees for Sargent Keso and BMW, 15 degrees for Kaba Gemini and 45 degrees for Kaba 20 and 20S. (See photograph 8.)

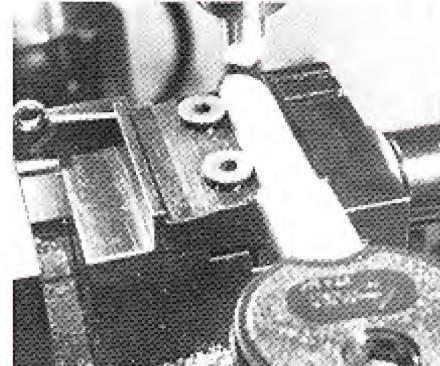
The sample key is secured in place on one adaptor with the hex head set screws and the blank secured in the matching adaptor in like manner. (See

**9. The sample key is secured in place.**

photograph 9.) The tip stops are placed into slots in the rear of the vise jaws and the adaptors are gauged from there. (See photograph 10.)

The angle adaptors have a definite left and right side and the keys must be correctly positioned. Also, the adaptors must be placed in the vise jaws in the proper left and right configuration. We have found that identification is a lot quicker and easier by applying a bit of red nail polish to the left side of the adaptors.

With the sample and blank keys properly positioned, the machine is turned on and using the X-Y handle the tracer is positioned above one of the cuts in the sample key. Using the Z handle, the cutter is brought into contact with the blank and downward motion of the Z handle is continued until the cut is made. This action is repeated until all cuts are made on one

**10. The tip slots are placed into slots in the rear of the vise jaws.**

plane of the blank.

At this point, the blank must be removed from the adaptor, turned over and reset into the adaptor, tip adjusted, and the cuts made in the second plane. Next, the sample key and the blank must be removed from the adaptors, placed in the left side, secured, tipped, and cuts made in the third and fourth planes as described for the first and second planes.

This does take some time, and your charges for this type of key should reflect your efforts. Miscuts are expensive in time and material, and careful set-up is an absolute must for profitability. Milling operations (i.e., 2 track and 4 track) would seemingly go

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a bit faster since the angle adaptors are not required, but we have found that the actual time to duplicate a 4 track is about the same as for a dimple type. This is due to the nature of milling in which several passes should be made on the blank with a small amount of material removed on each pass.

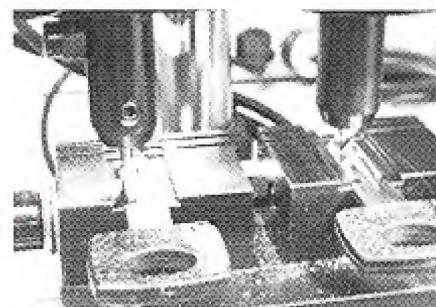
Milling requires that the tracer be placed in the arbor and firmly secured. (Note that the tracer spring is not used for milling.) And the milling cutter is lightly secured in the cutting arbor with the tip of the cutter slightly below the tip of the tracer. Two identical blanks are secured in the vises, gauged from

the shoulder or the tip as required, and the head is lowered with the Z handle until the tracer touches the blank in the left vise.

Downward motion of the Z handle continues until the tip of the cutter touches the blank in the right vise at which point the cutter is securely tightened in its arbor. We have found that a small piece of paper or an .004 feeler gauge placed on the right side blank when the cutter is lowered, will provide clearance between the cutter and the vise and will provide a nice cut.

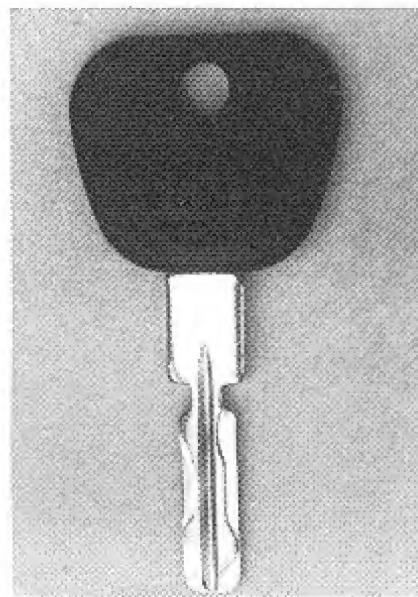
Milling cuts are best made, as mentioned, by making several passes and

removing only a small amount of material with each pass. (See photograph 11.) Four track keys are milled



11. Milling cuts are best made by making several passes and removing a limited amount of material.

from bow to tip starting on the right side and then from tip to bow on the left side. When milling on one side is complete the blank is repositioned in the vise and milling is again performed to complete an operating key. (See photograph 12.)



12. The blank is positioned in the vise to complete an operating key.

Mercedes Valet keys can be made from a Primary key by the use of a special jaw (furnished). (See photograph 13.) The standard jaw is removed from the right hand vise and replaced with the special jaw which is designed to



13. A special jaw is used to make a Mercedes Valet key from a primary key.

Continued on page 90

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All-Lock Products

"Five of All-Lock's newest products are detailed in this article. These products all feature All-Lock's typical good quality."



by Russell Alsbrook

The All-Lock Company personnel strive from start to finish to produce quality products for aiding the locksmith and increasing the locksmith's potential for new business.

All-Lock also has, over the years, produced quality original equipment for Ford Motor Company, Chrysler Corporation and General Motors Corporation. Many automobiles and trucks built by these corporations were originally equipped with lock assemblies built by All-Lock.

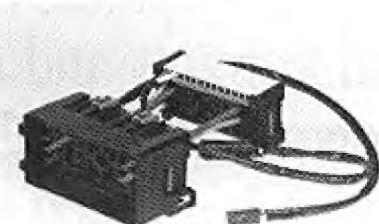
Five of All-Lock's newest products are detailed in this article. These products are in All-Lock's 1990 product development category and are based on the same quality used in the production of All-Lock's other products.

Of all the newest products in All-Lock's product line, it is evident that the top performer is the VATS (vehicle anti-theft system) Decoder. (See photograph 1.)

The VATS Decoder means bad news for car thieves by making diagnosing system failures, servicing the column



1. All-Lock's A-7000 VATS Decoder.



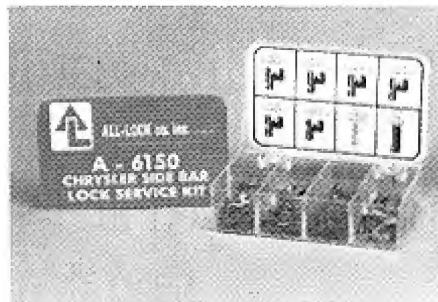
2. The A7001 VATS Adaptor.



3. The All-Lock A7000C Car Entry Manual.



4. The All-Lock key cover kit.



5. The Chrysler side bar service kit.

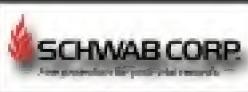


6. The A6600 Honda pinning kit.



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and duplicating the correct key a simple task.

The All-Lock A-7000 VATS Decoder is a sophisticated diagnostic tool, yet easy to use. It is powered by a non-included 9-volt battery and is totally portable. The long wire leads make it easy to use in cramped auto interiors and the decoder is housed in a compact steel case to ensure a long life. Complete instructions are enclosed on the inside lid for easy to use on the job performance.

The system is a major advancement in auto security and has helped thefts of certain models drop over 40 percent.

The VATS Decoder identifies correct VATS key blank from a customer's original keyblank and decodes a correct VATS key blank from the vehicle (if the original key is lost). The Decoder also diagnoses steering column correction problems and VATS computer problems.

The A7001 VATS Adaptor is directly behind the VATS Decoder in All-Lock's product line review. (See photograph 2.)

The A7001 Adaptor is required in order to connect the A7000 VATS Decoder to 1990 Cadillac Models and will also be a requirement for the 1991 Oldsmobile 98, Oldsmobile Touring Sedan and Buick Electra.

The A7001 Adaptor is an absolute necessity for those locksmiths who purchased the All-Lock A7000 VATS Decoder since it would be a shame to miss a job on a 1990 Cadillac if the locksmith had a decoder but not a A7001 Adaptor.

Another advantage of the adaptor is its ability to allow locksmiths to enlarge their businesses by being able to work on vehicles with VATS systems.

All-Lock's A7000C Car Entry Manual has always been one of the most comprehensive, easy to use, profit enhancing car entry manuals on the market. (See photograph 3.)

The A7000CU4 #4 Update is now available to bring the A7000C manual up-to-date with current automotive production. The update contains over 370 pages of new up-to-the-minute information and hundreds of photographs to make car entry easy, professional and profitable. This is available only to locksmiths.

The All-Lock service kits are recognized by locksmiths as products to allow them to use expertise in rekeying or repairing automotive locks. The product assurance All-Lock uses for quality replacement components is

also used in 1990 service kits.

All-Lock provides quick identification of General Motor's keys, with an attractive snap on red, grey, blue or standard black covers. (See photograph 4.)

The A6250 key cover kit contains 25 covers of each color both primary and secondary keys.

The A6150 Chrysler Side Bar Service kit (see photograph 5) contains 100 of #1-#6 tumblers with 500 tumbler springs and 25 pin covers.

This kit enables the locksmith to service column mounted locks on Chrysler products 1972-89 with tilt wheel.

Six new tumblers have been added to the A6600 Honda pinning kit (see photograph 6) which enables locksmiths to service the 1988-89 Civic model. The A6600 includes 100 each of 15 different tumblers with 10 gaskets; 12 face plates; 500 tumbler springs and 10 return springs.

The new products are designed and produced for the locksmith and the VATS Decoder and Adaptor can be considered tools for the future in General Motors automobiles.

For more information contact: All-Lock Co., P.O. Box 1349, Selma, AL 36701, (205) 874-9001. ■



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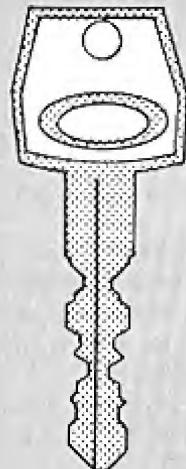
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NATIONAL
AUTO LOCK SERVICE, INC.

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The
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Locksmith



Key

In this section you will find a number of products by various key machine manufacturers. Virtually every locksmith owns one or more key machines since key cutting is probably your best known service. A key machine is a piece of equipment you will live with for a long time, using it thousands and thousands of times over the years. Choose well and you will be purchasing an item that will pay for itself many times.

In this product review section we have tried to bring together a representative sampling of the key machines that are offered to the

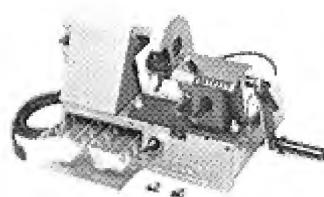
trade. Of course, it is impossible to have every manufacturer represented here. But we have tried to assemble a good sampling of material for you to examine.

If you feel you need more information about any of the items presented here, please use the Rapid Reply card to request literature. You will find the Rapid Reply card toward the back of the issue. Like cars, there are styles of key machines to suit everyone's taste. Be sure to give the matter plenty of thought. MG

Abloy Disklock Key Machine

The Abloy 6200 Key Cutting Machine is a code machine used for cutting the Abloy Disklock key. This machine can make the four angled cuts in each of 10 positions on the Abloy Disklock key blank. All cut angles are set by simply adjusting the cut lever.

As the operating handle is rotated, the key is cut on all sides and the machine automatically spaces to the next position. This machine has one drawer for key blank storage and another to cut key shavings. Cut keys can be inserted into a small wire accessing a wire brush to remove any burrs.



Circle 251 on Rapid Reply

Curtis' New Code Cutters

Curtis Industries makes various hand-held, portable code cutters to cut perfect keys every time.

While the 45 degree cut key used to be almost standard on vehicle keys, the locksmith should be seeing more of the 47 degree cut keys from vehicle manufacturers.

Curtis' model 15B-47 code cutter is required for many of the newer locks with eight or more cuts as supplied in all late-model Japanese vehicles and under no circumstances should the new eight-cut key be cut on a standard 45 degree code cutter.



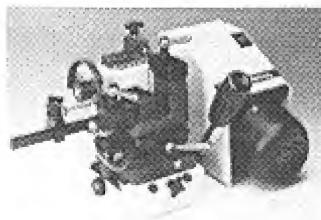
Circle 252 on Rapid Reply

Borkey's New Clou Machine

The new Clou machine manufactured by Borkey was first introduced at the March Cologne Fair and was on display at the DiMark booth at ALOA.

The Clou is designed for cutting slotted and bit keys and is available with several optional carriages. It comes equipped with a standard carriage for cutting slotted safe keys, and is accurate and easy to use.

The Clou is in the price range of all operations that require dependable, fast, and accurate cutting of slotted and bit keys.



Circle 253 on Rapid Reply

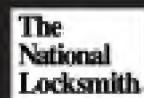
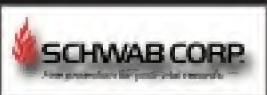
ESP's Manual Key Machine

ESP Corporation's new Model 1000 key machine is an enhanced version of the Model 990, and features wider 4" spacing between the outer and stylus to cut bigger headed and longer keys.

Double-sided reversible vise jaws that eliminate the need for adapters, a 34MC High Speed cutting wheel, a bronze gage fork and a long lasting nylon deburring brush are all featured with the machine. ESP machines are also fabricated and assembled in the factory for dependable security.



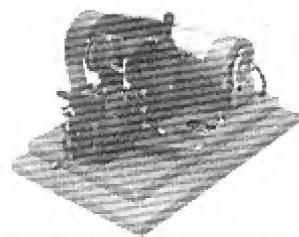
Circle 254 on Rapid Reply



Framon's #2 Code Machine

The Framon #2 will cut standard cylinder keys, flat keys (locker and deposit box), foreign and domestic auto keys, Medeco and Emhart keys. The Framon depth and space book contains information to cut 1159 code series.

Components included with the machine are a depth and space book, three cutters, four spacing blocks, 6" precision dial calipers, spacing clip (Ford & Best) and allen wrench. The Framon #2 code machine eliminates need for cards, discs, cams, carriages, and depth and space keys.



Circle 255 on Rapid Reply

HPC's Portable Key Machine

HPC, Inc.'s TKM-90, is a compact, light and portable key machine that when closed, measures less than 4" in length and only 1 1/4" in diameter.

The key machine is factory preset to cut standard size center sequence tubular keys by code and offset left sequence and right sequence (including dead pin cuts) can be cut with one simple adjustment. Greenwald style tubular keys can also be cut.

The tubular key blank is held firmly in place by the swing-away key holding fixture and also locks the micrometer depth adjustment knob at any pre-selected depth.

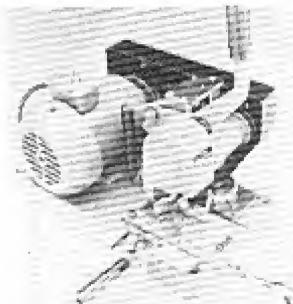


Circle 256 on Rapid Reply

Medeco Locks' Biaxial Machine

Medeco Security Locks offers their Biaxial manual code cutting machine, designed exclusively to cut Medeco Biaxial high security keys.

It features preset positioning for fore and aft cut spacing. A Biaxial key cutting code book is also supplied with each key machine, free of charge.



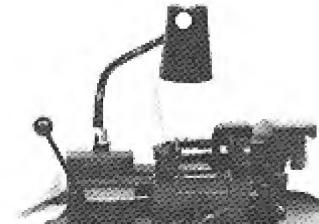
Circle 257 on Rapid Reply

RY100 Rytan Duplicator

The 100 percent field serviceable RY100 Duplicator from Rytan is designed to be quickly and easily replaced when replacement is necessary.

A 3/8" cutter on a 5/8" drive shaft through two sealed 1 1/8" ball bearing assemblies helps insure long life and accurate cutting for many years.

The top jaws can be reversed from a regular to a step jaw by loosening the top jaw nut, sliding the jaw out, turning it over and sliding it back in place thus eliminating the need for a step wire or other type of spacer for small keys.



Circle 258 on Rapid Reply

Scotsman Security's 747XU Machine

Scotsman Security Products, Inc.'s Scotsman 747XU Key Machine will quickly duplicate, decode and cut-to-code all three size tubular keys.

The key machine makes all necessary cuts for 7, 8, 9, 10 and 11 pin lock, which have center, left or right cuts, as well as dead pin cuts and cuts within cuts.

A standard feature on the 747XU is the Segal Modification which releases the machine's inner control, allowing keys to be cut in any radial position at any depth. Other standard features include a solid carbide cutter, heavy-duty ball bearing motor, lexan safety shield and a 3-prong grounded cord. It is available in 110 volt A.C. or 12 volt D.C.



Circle 259 on Rapid Reply

Silca's Free Key Offer

Silca is offering BRAVO USA Key Machine buyers an added bonus of 600 free quality key blanks for popular autos by sending Silca a copy of the distributor's invoice along with the guarantee card.

The BRAVO USA duplicates key blanks by using the four way jaws specifically designed to hold any key and the driver lever transports the blank across the large 800 mm cutter while the dual rod carriage holds the tightest tolerances.

Also included is a nylon deburring brush to brush off the cut key.

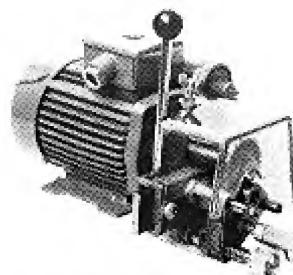


Circle 260 on Rapid Reply

Abloy LK-01 Standard Machine

The Abloy LK-01 machine is designed to cut the standard Abloy key blank by code. This machine has six preset cutting angles that can be made in each of the nine positions on the standard Abloy key blank. The spacing is controlled by a feeder screw that indexes to each position.

The standard Abloy keys serviced by this machine are very common in coin-operated applications such as vending and laundry coin boxes.

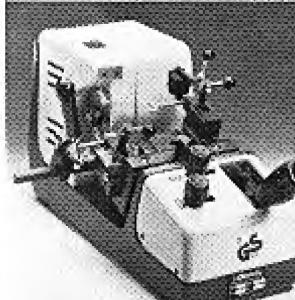


Circle 261 on Rapid Reply

DiMark's New Lord Machine

The heavy-duty, accurate Borkey Lord machine can handle cutting Southern Steel and Folger Adams prison keys.

The key machine is supplied with the standard carriage for slotted safe keys and three widths of cutters. The optional double-bit carriage helps to quickly make double-sided safe keys.



Circle 262 on Rapid Reply



ESP's New 3000 Lever Machine

The new Model 3000 Lever Key Machine from ESP Corporation is similar to the Models 1000 and 5000 but is operated by a lever that allows keys to be cut in one smooth easy motion using one hand. The lever operation is designed for long lasting, dependable security when making keys.

The Model 3000 features wider spacing between the cutter and stylus to cut up-to-date large head and long keys and it is equipped with double-sided reversible jaws, an 11MC cutter, bronze gage fork, a durable nylon brush and rubber bumper feet. This machine is fabricated and assembled in ESP's state-of-the-art factory.

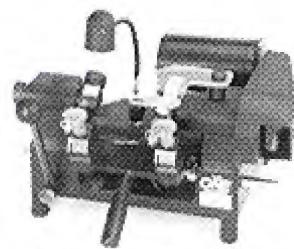
Circle 263 on Rapid Reply

HPC's One Machine

The One Machine by HPC is a semi-automatic, durable and accurate duplicating machine designed to cut several hundred keys per day, effortlessly.

The One cuts standard cylinder keys plus most foreign automotive keys and comes complete with reversible jaws to grip hard to hold, double-sided foreign keys.

Included with the One Machine is the Softie Brush, a steel angular cutter (CW-80), a built-in work light, cutter guard and adjustable clear cutter shield.



Circle 264 on Rapid Reply

Scotsman's Versatile Key Machine

The 747X Key Machine from Scotsman Security Products, Inc. is dependable and versatile in duplicating, decoding and cutting-to-code.

Along with the Segal Modification feature, a mechanism to release the machine's inner control to allow keys to be cut in any radial position and depth, other items included are a solid carbide cutter, heavy-duty ball bearing motor, lexan safety shield, and a 3-prong grounded cord. It is available in 110 volt A.C. or 12 volt D.C.

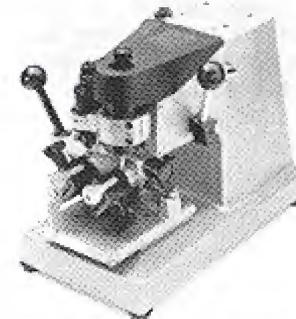


Circle 265 on Rapid Reply

Silca's New Club Jr.

The affordable and easy operational Club Jr. key duplicating machine from Silca USA is designed to make the popular Laser-Sidewinder auto keys such as the Mercedes two and four track keys for the most current Lexus and Infiniti Automobiles.

The Club Jr. also duplicates various automotive and commercial high security keys and with optional duplicators, dimple keys can be duplicated.

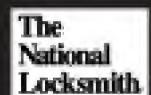
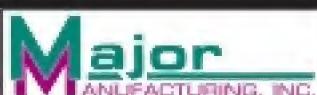


Circle 266 on Rapid Reply



**HPC has it all:
Key Machines, Software, Books, Car
Openers, Pick Sets, Tools, Door Guards,
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Servicing Lexus

"The Lexus LS400 and ES250 are two cars which have a two stage locking system. They also have a master and valet key."

by Lynn Hawkins

The Lexus LS400 and ES250 are two cars which have a two stage locking system. This is defined as being able to turn the key once to unlock the driver's door and turning it a second time to unlock all remaining doors. These vehicles come with two master and two valet keys plus a wallet key mounted in a credit card type holder. (*See photograph 1.*)

While there is no known numerical range at this time for the code series, the following are the Lexus key blanks:

	Primary	Secondary
Ilco:	LXP90-P	LXV90-P
Silca:	TOY40P	TOY40AP

Measurements for spacing and depth information are .0351 and 7.75 mm and



1. The Lexus' master and valet keys.

do not ever attempt to force an uncut key into these locks since it will destroy the tumblers.

The following is a depth and space chart for the double sided wafer tumbler locks:

Depths .0236 and are measured from edge of blank on both sides.

1	.0256	1	.8819
2	.0492	2	.7874
3	.0709	3	.6829
4	.0945	4	.5984
5	.1161	5	.5039
		6	.4095
		7	.3150
		8	.2205

The eighth space controls the valet key. The code locations are on the passenger door cylinder and the tag is used with original keys. In photograph two, the set of locks for the LS400 model is shown. The ignition cylinder on the LS400 is located in the dash panel while on the ES250 model, it crosses

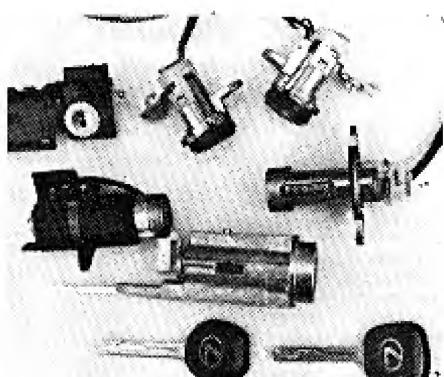


LOCKMASTERS
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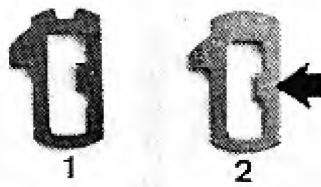
TM

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information*

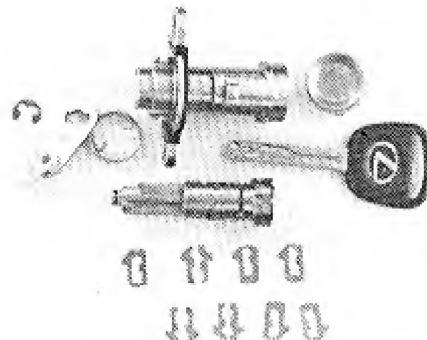
Providing quality
tools, parts, and
service for
the security
professional.



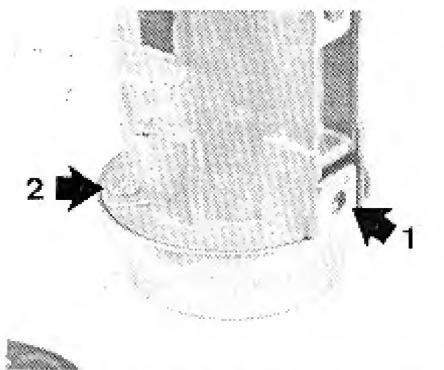
2. The set of locks for the LS400 model.



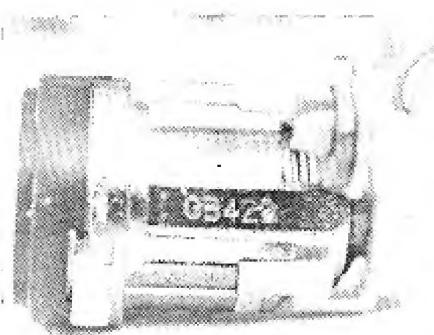
5. A close-up view of two tumblers.



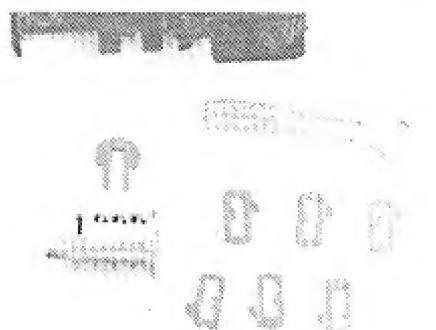
8. The trunk cylinder and tumbler arrangement.



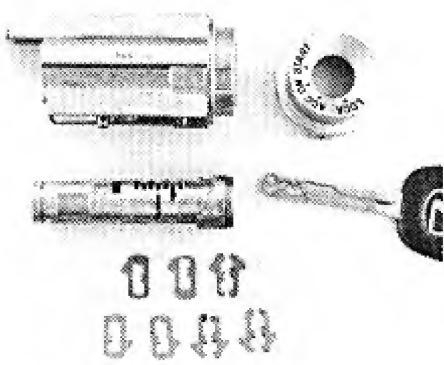
3. Removing the plug from the cylinder.



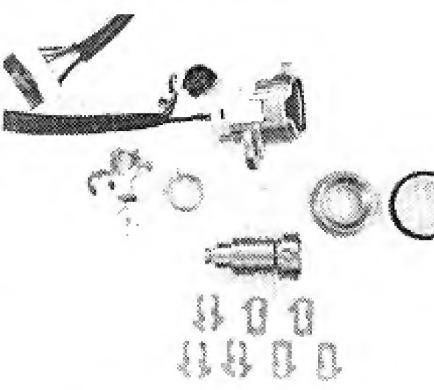
6. The key code is stamped on the passenger door cylinder.



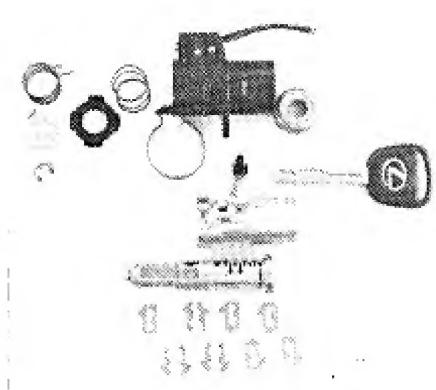
9. The glove box cylinder.



4. The ignition cylinder parts.



7. The driver's door cylinder.



10. The remote trunk and gas cap release lock.

ways to the steering column.

The ignition cylinder on both models can be removed by turning the key to the "ACC" position and depressing the retainer about two inches from the face of the lock and between the "LOCK" and "ACC" position.

To remove the plug from the cylinder, a pin has to be removed by drilling along the side and prying the pin out. (See photograph 3.) Do not drill the pin because it will only spin in the loose fit. There are two rivet type holders pointed out by the second arrow in photograph three that may have to ground slightly to get the face cap off and the retainer ring at the end of the plug must also be removed.

In photograph four, the ignition

cylinder parts are shown. The tumbler arrangement in the ignition has three sets of half tumblers and four full tumblers counting from the face of the cylinder.

Photograph five shows a close-up view of two of the tumblers used in the locks. The #1 tumbler is found in the eighth position in the trunk, glove box and the cylinder. This locks the remote function of the gas flap and trunk release and controls the use of the valet key.

The key rest pointed out by the arrow in photograph five, is .112" high (2.85 mm) and the groove in an uncut key is only 0.063" wide (1.6 mm). These measurements are the reason that an uncut key blank will destroy the

tumblers if it is forced into the locks.

Photograph six shows the key code stamped on the passenger door cylinder and photograph seven shows the driver's door cylinder. The arrangement of tumblers in this photograph have four full type and three sets of half type and no replacement caps are needed since the caps can be removed easily.

Shown in photograph eight, is the trunk cylinder and the tumbler arrangement which has similar measurements as the car door but has an eighth tumbler added on. This eighth tumbler keeps the valet key from working while photograph nine shows the glove box cylinder having only six tumblers. In photograph 10 is the lock for the remote trunk and gas cap release. ■

NLSA Convention

"Over 300 manufacturers and distributors in the locksmith supply industry participated in this annual event."

The National Locksmith Supplier's Association's 20th Annual Membership was held at the Westin Hotel O'Hare in Rosemont, IL on May 1-6 with over 300 distributors and manufacturers in the locksmith supply industry participating in this annual event.

It was the highest attended conference for the Chicago area with business sessions and individual manufacturer-distributor conferences highlighting the five-day event.

A pre-conference seminar centered on the use of video to help with the employee training void and "Improving Manufacturer/Distributor Relations" and "Asset Management as a Profit

Generating Activity," were two presentations during the conference available to participants.

Distributors and manufacturers conducted individual business conferences throughout the entire event and these annual appointments offered the opportunity to meet with senior management to discuss areas of mutual concern.

NLSA members capped off their meeting with a celebration of the "magic" of the NLSA including a Magical Mystery Dinner which featured food with an international flavor and the entertainment consisted of a magician, a caricaturist and fortune

tellers.

The NLSA is a 40 year old association which represents U.S. and Canadian wholesale distributors and suppliers of locks and locksmith supplies. Current membership consists of 80 distributor companies and 75 manufacturer companies. ■

In Memorium...



American Lock & Supply is saddened to report the death of Tom Bokarae on June 16.

During the past four years, Tom served as a Marketing Manager for AmLok and was instrumental in the introduction of many of the company's innovative customer-oriented marketing programs.

More than just a business associate to hundreds of customers, Tom was a friend and a willing assistant whenever and wherever he was needed.

Tom visited countless dealer locations and freely gave his advice based on past experiences and helped customers develop their businesses. Tom was also a fixture at industry trade shows across the nation by conducting seminars on marketing and merchandising techniques.

Tom Bokarae was 40 years old at his untimely passing and will be missed by the entire locksmith community.



Howard Johnsen, NLSA President, presiding at the Association's 20th Annual Membership Conference.



NLSA Education Membership Chairman Sean DeForrest confers with Video Art's General Managers Gail Longmore (L) and Ann Boland (R).



Steve Pierco addresses the NLSA 20th Annual Membership Conference with his presentation on "Asset Management as a Profit Generating Activity."

John Monoky addresses the issue of "Improving Manufacturer/Distributor Relations."



Lock-Pik System II

"The LaGard key lock is quite popular in the midwestern U.S., especially in chain type restaurants using Major safes."



by Dale Libby

If there is a new tool or system for safecracking, I want it. But before I buy it, I would like to try it and see if it really works. I read about this tool in an article in this magazine last year. It seemed like something I would like to own.

I contacted my friends at Lockmasters, and they sent me the "Skip Pik" system. I call it a system, because the pick requires skill to use it along with a few other items that must be used in order to successfully open LaGard 2200 series key combination locks.

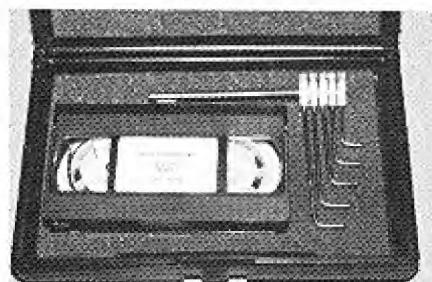
The LaGard key lock is quite popular in the Midwestern United States, especially in chain type restaurants that use Major Safes.

This lock uses a high security grooved, unduplicated round key to activate a group two standard sized combination lock and contains a drive cam along with four wheels.

One of the most noticeable features with this lock is that it is key changeable and changing the keys can be accomplished in less than 30 seconds with the correct change procedure.

In photograph one, you can see the Skip Pik and video tape cassette packed in a plastic foam filled carrying case. The video cassette is the first part of the Skip Pik system.

The tape is eight minutes long and shows step-by-step procedures for using the pick and also what is going on inside the lock while the levers the levers are being manipulated on the outside. The tape is very clear and precise and it is easier to use the tool with the video compared to only reading



1. The LaGard 2200 "Skip Pik" and video tape instructions.



2. A Pro-Amplifier is needed to operate the Skip-Pik.

the concise directions that are also included with the pick.

The last part of the Skip Pik system is an audio amplifier that is used to increase and intensify the sounds that the 2200 lock makes throughout the manipulation process. The Pro-Amp amplifier has a filtering system that deletes random noises so concentration can be made of specific sounds, clicks, and bumps. (*See photograph 2.*)

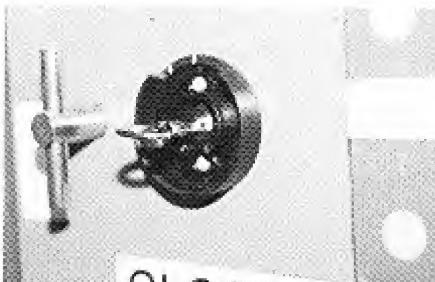
The amplifier can also be used on regular combination locks to diagnose stuck or broken flys, wheel aberrations, and counting the number of wheels in the lock.

The amplifier contains a magnetic microphone which sticks to the surface of the safe and gives you hands-free operation. The use of an amplifier is mandated, but if you already have a good one, then all you would need to purchase is the Skip Pik and the video tape instructions and use your existing amplifier.

To test the tool and the amplifier, I chose one of my many safe containers that I had retro-fitted with the LaGard



3. The dial is being pulled out from the surface of the door.



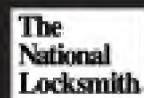
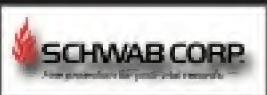
4. The key is inserted in the guide and the attached dial ring.

2200 lock a few years earlier. Instead of having an exposed key hole and plate, I decided to be a little tricky by installing a LaGard spy-resistant dial and dial ring in conjunction with the key guide.

In photograph 3, the dial is being pulled out from the surface of the door uncovering the key hole for the insertion of the 2200 key. There is only about two inches of dial spindle attached to the dial. The dial rotates easily, pulling out with some friction.

In photograph 4, the key is inserted into the guide and the attached dial ring. When the key is turned one half turn to the right, the lock opens. There is a cut-out on the bow of the key to insure proper insertion and handing for the customer. Put the key in the hole with the notch to the left at the 9 o'clock position.

The procedure for using the pick is rather easy, by inserting it in the lock and moving the levers, you will get preliminary readings. Then move the levers in a random systematic order to open the lock. As in numerical manipulation, wheel shading can also



be a problem, so this is why using the audio amplifier is very important to distinguish between real and false gate "clicks" before the lock will open.

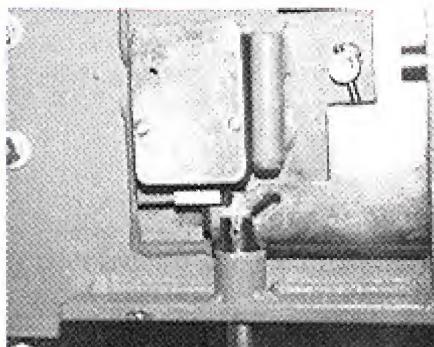
Before the pick can be successfully inserted into the keyway of the 2200 lock, all the levers must be aligned properly to let the pick be fully inserted.

For a standard right hand mounted lock, the levers will be aligned at 12 o'clock. The lock in photograph five was mounted vertical down (VD) so the levers had to be inserted and aligned at the 9 o'clock position. This is explained clearly in the written and taped instructions.

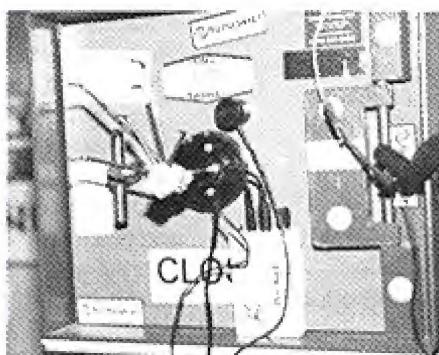
In photograph six, the Skip Pik and the amplifier are in working position and all I have to do is put on the headphones and go to work. I thought it would be easy to do since the levers would only have to be more or less 180 degrees at the most to pick the lock open. The directions are very specific on this tip.

I tried for about 50 minutes to get the lock open and watch the video tape a couple of times again, but I was not having any luck at all. Never to say "Diebold." I opened the door with the correct key and changed the key to one of the spare different keys I have in my safe combination lock kit.

This time, it took me 18 minutes to



5. Inside view of lock showing vertical down handing of the 2200 key lock.



6. The Skip Pik and amplifier are in working position.

get the door and lock open. Everything worked as it should and I changed the combination back to the original key and set up to work on the lock again

with newfound confidence. 45 minutes later the lock opened and I was sweating.

This tool system works successfully if you have to drill a lock, since the 220 is still a combination lock with wheels, lever and fence, and the wheels have gates in them.

I was then called for an emergency opening of an inner door on a Major safe which had a 2200 lock. I tried to pick for 20 minutes with no real success, due to the location of the safe, my attitude, and the several managers stepping over, on me and on my tools. Also hindering to my work was the noise of the remodeling of the premises that was taking place adjacent to the place where I was working.

I took my drill in hand and penetrated the soft steel door to the listed drop-in area (the same for an 1800 or 3300 combination lock). I used the Skip Pik to move the wheels of the lock under the lever and the #4 lever to pull the bolt back.

After carefully removing the pick, I repaired the hole and sold the customer a new lock and keys. This tool saved me from drilling off the lever and probing the bolt back, thanks to Skip and Lockmasters. Open and Prosper! ■

Major MANUFACTURING, INC.

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Is a Self-Portrait
Of the Person Who Did It.
Autograph Your Work with Excellence.**

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Common Lock Myths

"Although I was unable to get the story from the horse's mouth, I talked to a woman who said her husband answered a call from the hospital."



by Sara Probasco

Folklore is something of a tradition in Texas. During the 12 years I have lived here, I have learned that many of the tales people tell are either exaggerations of the truth or bold-faced prevarications. They often originate "off down the road a piece," and are enhanced with each telling.

Take the story about the hoop snake. Now, anyone who has ever entered into snake-talk with a Texan has heard some version of the snake that takes its tail in its mouth, making a hoop of its own body and rolls down the road, chasing after a person.

Then there is the tale of the rattlesnake that sinks its teeth into a cowboy's boots before being killed. Years later, he reaps post-humous revenge when the cowboy's descendant steps into the boots and poisons himself on the broken tips of the dead snake's fangs.

"Come on, now. Quit pulling my leg," you say.

You might be surprised at the number of people who listen, wide-eyed with wonder to these and other strange, sometimes bizarre, tales. The phenomenon is by no means confined to Texans.

One characteristic of such lore is a lack of first-hand information and whoever tells the tale knows someone it happened to, or has heard it from a friend who knows someone who really experienced it.

"Urban legends," similar to jokes, seem to surface simultaneously in various cities across the country.

An example of an urban legend in the locksmith circle, is a tale which recently circulated of a man who

somehow constricted his private parts with a hardware part or a padlock in such a way as to require the services of a locksmith. His explanation as to how this happened in the first place varies, as does the method of release, but the story is basically the same when told each time.

I have been told several versions of this tale by locksmiths from different states and each claimed to know "for a fact," a locksmith that had been called to the rescue.

Although I was unable to get the story from "the horse's mouth," so to speak, I talked to one woman who claimed her own husband had answered a similar call from a local hospital. He had refused to operate the metal saw required to free the man, but instead chose to stand by and coach the doctor in this procedure.

"After all," he was quoted as saying, "what if the saw slipped? I don't carry malpractice insurance."

A widely told locksmith "experience" relates to the middle-of-the-night call that comes from a woman who has just tossed her male partner out on his ear, or he has stormed out following a quarrel. She then wants the locks rekeyed before he returns.

Certainly such calls do occur in the locksmith trade, but with embellishments detailing the woman's scantily clad appearance and obvious need of consolation, it causes me to wonder how often such tales are simply "locklore" or wishful thinking.

Have you heard the one about the man who elicits a policeman's assistance in opening a vehicle, then hot-wires it and drives away, or strips the inside, as soon as he is in the clear?

How about the one of the policeman who sees someone rummaging around under the hood of a parked automobile and helps him remove the "run down" battery so he can take it to be recharged, never seeing the man again?

Every so often, a customer comes

into our shop wanting to borrow our miracle "master key," the one that will open any automotive lock. They either think we're lying or uninformed when we deny the existence of such a key, because they know someone who has a friend who knows a locksmith who knows a locksmith who uses one all the time.

Sometimes, it's difficult to separate fact from folklore. When I lived in Mississippi, a friend told me about a rash of battery thefts from a reserved-parking lot where she parked her car during the work day. The thieves would select older model vehicles with exterior hood latches, steal the car batteries, wait for the car owners to replace them, and then steal the new batteries.

According to my friend, several of her friends, (here's the old friend-of-a-friend legend again) had resorted to padlocking their hoods to prevent repeated battery replacement.

I had accepted this tale as true and I passed it along. Then I heard a version of the story from someone in Texas, North Carolina, then New Mexico.

I realized then one of three things had apparently happened. Either word of the Mississippi incident had traveled around the country quickly, or the thief, or his modus operandi, had moved around from state to state, or I had been a victim of "urban legend."

One lock-out tale that has been circulating for some time was first documented in 1978. The story involves variations on a single theme. A commercial airline pilot and co-pilot, setting the controls on automatic pilot, both leave the cockpit for some reason and the door slams shut, locking the only keys inside the cockpit. In every instance, they resort to breaking down the door with a fire ax while horrified passengers look on.

Although many discrepancies and "holes" exist in this tale, the story has been perpetuated by a variety of pilots,

Continued on page 91

Lock Picking Techniques

"There are very few locks that cannot be manipulated in one way or another. You need specific knowledge and proper tools."

by Bob Sieveking

To manipulate locks open because the proper key is lost, is a common request for a locksmith. The art of "lock picking" is more practice than theory, but there are a few points that you should be aware of if you are to achieve consistent success. The following questions should be asked: What allows a lock to be manipulated/picked? What tools will I need? How should I begin? Why is picking tension so important?

There are very few locks that cannot be manipulated in one way or another. Although many locks are stated as being pick-proof in the advertisements, if you have the specific knowledge of

the lock and the proper tools, along with the right attitude, even the most secure locks swing open in defeat when gentle persuasion is used by the craftsman.

The first and most important tool of any craftsman is the proper attitude toward the job at hand. It seems that those having the most success, approach each job with the quiet confidence that says, "It can be done." If you tense up, you start to grip the pick like it is a screwdriver and the tension wrench like a pry bar.

I've worked with many apprentices, teaching them to pick common lock cylinders in the shop, and watched as they tried to force the plug to turn with

sheer intense frustration. After relieving them of the pick and tension wrench, I would say, "you're just not holding your mouth right." I would tell them to pick each tumbler, one at a time, feel each pin with the tip of the pick, as you raise it, feel the pins to know which are caught at the shear line, and keep the tension at the very minimum.

The amount of pressure on the turning wrench or tension tool is critical, so never use more than the weight of a penny (for pin tumbler locks). If you start "gripping," you will never make it, your pick and tension tool will break and bend, and you will certainly not pick the lock. Attitude is the first tool to master if you want to master lock



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picking. Patient confidence is the key.

For an example, we will consider only the pin tumbler lock. Wafer tumbler locks are very similar in the way they pick, but require slightly more turning tension as a rule. Lever tumbler locks, similar to those found on lockers and mailboxes, use a similar picking technique, but require even more turning tension, while special tension wrenches and deep hook picks are used on the lever type lock.

In all cases, the tolerances of the lock are what limit its ability to resist manipulation. Minute differences in the levers of a lever lock allow the locksmith to "capture" levers at the fence and ultimately defeat the lock.

Machining tolerances, specifically in the drilled-holes of the lock cylinder shell and plug, and generally in the distance between the plug and shell (width of the shear line), allow the locksmith to "capture" pins at the shear line.

When all pins are separated at the shear line, the plug will turn and the lock is defeated. That sounds easy in theory, but it takes practice to achieve consistent success.

In illustration one, a lock cylinder has been cut away to illustrate the positions of the combining (bottom) pins and drivers (top pins) of a typical five pin key in knob or deadbolt lock cylinder. As you can see, the plug is prevented from being turned. The top pins, resting across the shear line, prevent the turning. The harder the plug is turned, the harder the top pins will bind at the shear line, and since nothing can be perfect, there must be tolerances in the machining of the cylinder and plug.

The most important tolerances to the lock picker is the alignment of the pin holes in the lock cylinder. The alignment of the pin holes of the cylinder and plug is very critical to some manufacturers, so they "marry" the plugs and shells of their lock cylinders.

The plug is assembled (undrilled) into the shell (also undrilled) and the two are drilled in one operation. Basically, this only means that the plugs and shells of similar cylinders are not interchangeable and it also means that the misalignment of the cylinder and plug holes is held to tighter tolerances, improving the pick resistance of the cylinder. Misalignment of the pin holes, as you see in illustration one, is the primary factor that will allow us to pick, or manipulate this lock cylinder.

As turning tension is applied to the

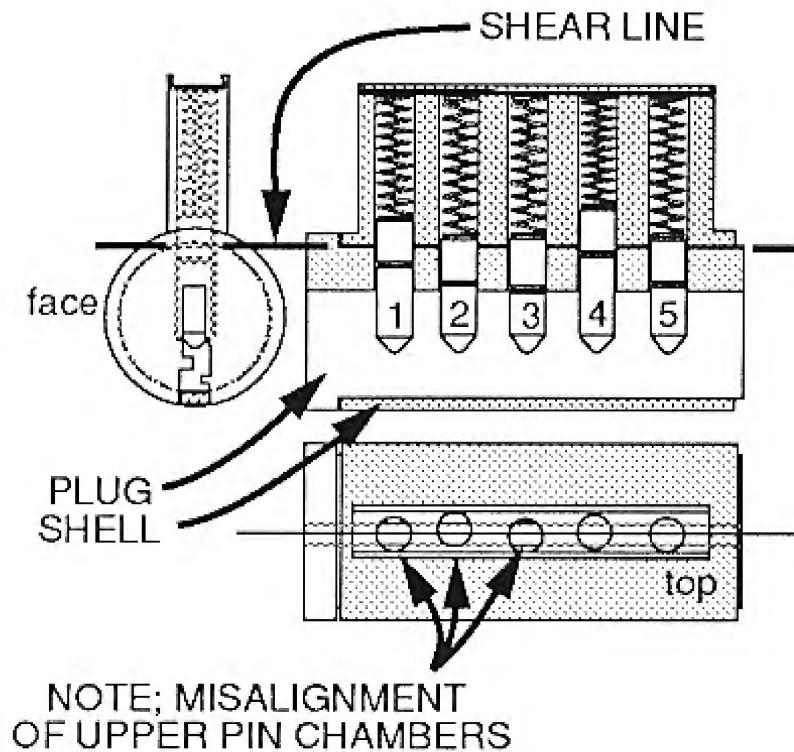


Illustration 1

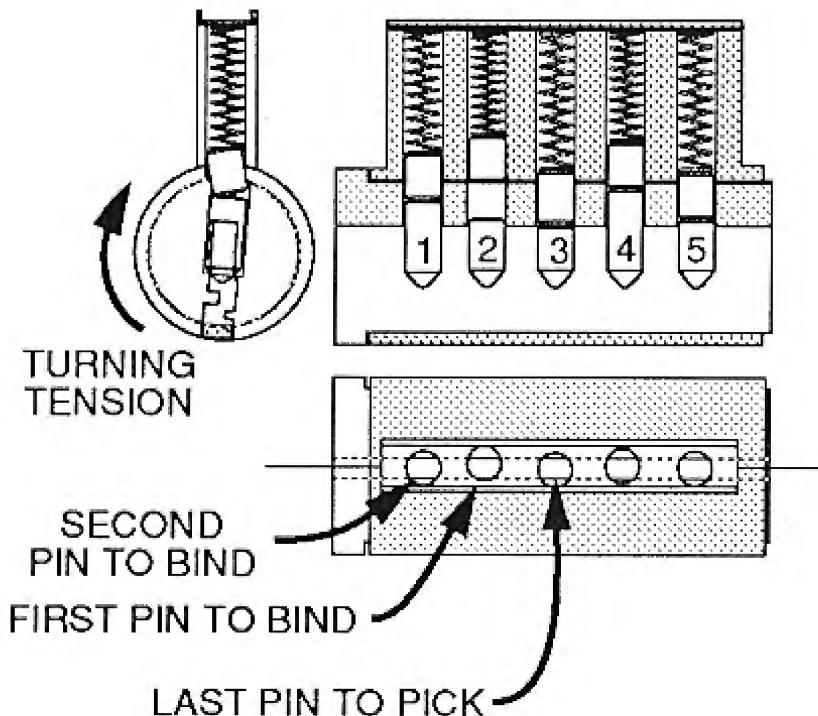


Illustration 2

plug, the top pins will bind or block rotation of the plug, and since all the top pins are not perfectly aligned, not all the pins will be bound at the same time. The misalignment shown in illustration one shows that pin number two will be the first pin to be bound. Look closely at illustration two to see why pin number two is the first pin to bind at the shear line while the upper pin hole (pin chamber) is displaced to the left of the center. The turning tension to the right, as shown in illustration two, will cause pin number two to bind before any of the other pins in the cylinder.

Once pin number two is held at the shear line, pin number one will be allowed to bind. (See illustration 3.) Maintained turning tension holds pin number two at the shear line as pin number one is raised and as the pin stack divides at the shear line, the top pin will hang or catch on the misalignment of the upper and lower pin chambers.

The upper pin chamber of pin number three is displaced to the right of the center, (see illustration 2) meaning that the plug must be turned even further to the right before the plug and shell pin chambers will misalign far enough to bind the pin or allow the upper pin (driver) to hang at the shear line.

In illustration three, the bottom pins will "float" or drop down, without the top springs tension, as the chamber is "picked" and manufacturing tolerances, similar to those shown, allow us to "pick" the cylinder "one pin at a time." Binding pressure can be applied to the tumblers of this lock one at a time. (The one great beauty of the sidebar lock, which is primarily responsible for its high degree of pick resistance, is the binding pressure that cannot be applied to the individual tumblers.)

Though the lock supplier catalogues are full of picks and picking tools of almost every description, the only tools you really need are those shown in illustration four. The diamond pick hook and tension wrench are the primary tools, and I pick 99 percent of the pin and wafer tumbler locks I am called to open, by using these three tools.

There are pick sets that contain well over a hundred different picking tools, but there is no valid reason for this usage. Riffles and balls, double balls and half balls, rakes of all descriptions and wavy wiggly picks that rock and twist, are all part of the sets, but if you want to learn to pick locks, get a small

PIN HANGS ON THE MISALIGNMENT CAUSED BY THE TURNING TENSION

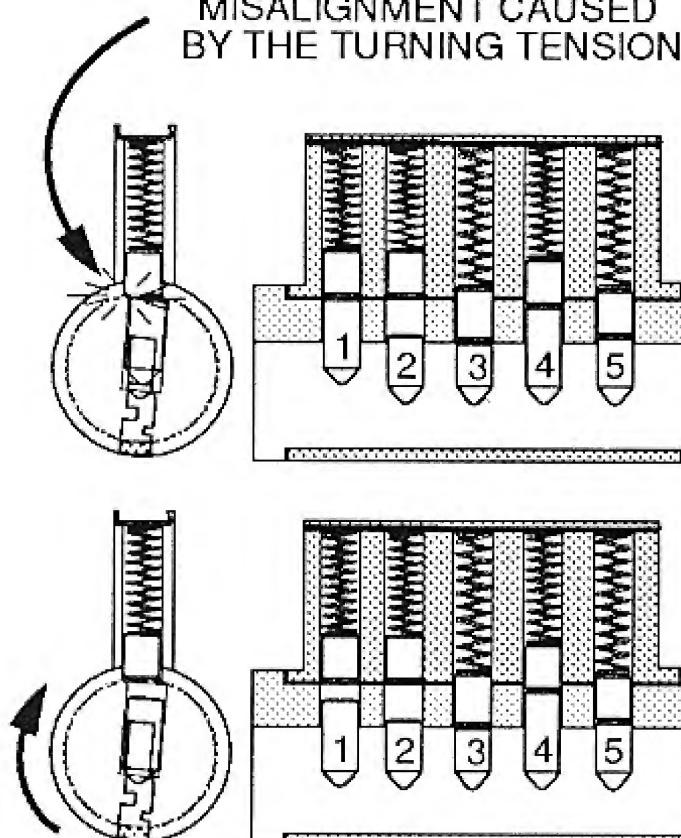
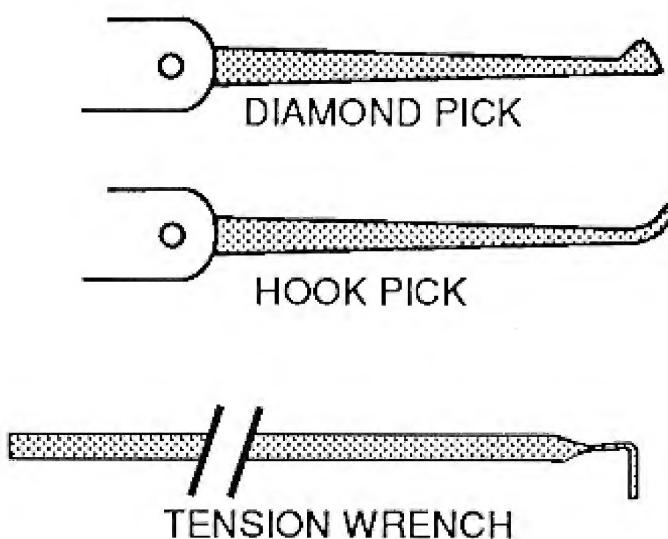


Illustration 3



LOCK PICKING TOOLS

Illustration 4

diamond pick, a medium hook and a simple tension tool or two.

The first step in manipulation is to satisfy yourself that the lock is in working order, and the customer or the situation will usually indicate whether the lock is in working order or not, but you should answer two questions before you invest any amount of time trying to pick a cylinder: Is the plug free to turn? How many pins are in this lock, and are they all working freely?

Run a key or a key blank in and out of the cylinder a couple of times to exercise the pins. Does the key lift all the pins easily, or is the lock gritty? Grit and sluggish oil gum can be removed with solvent or aerosol cleaner. Do not lubricate, graphite or oil the cylinder at this time.

Ether (starting fluid) carburetor cleaner and electronic contact cleaner work well for cleaning cylinders, but be careful not to damage the paint on the locks or any paint around the area with these solvents, and ether is very flammable, so use it with extra caution. Use a blank key, as you flush a dirty lock, to free sluggish pins, and turn the key left and right to be sure the plug is free in the shell.

When you are satisfied that the lock is clean, count the pins as you see in illustration five. Reverse the diamond pick, and insert it into the back of the lock cylinder, raise all the pins in the lock, and slowly withdraw the pick out of the front of the plug. You should feel and hear the pins spring down as they fall off the tip of the pick and they will make a slight snap if they are clean and free.

Sluggish and stuck pins will be slow to drop down and should be cleaned again. If you find that a pin is stuck and cannot be made free by cleaning or shock vibration, you might consider replacing the cylinder since if the pin and plug are free, the lock will probably pick.

Gaining a feel for the proper turning tension is not as hard as you may have been led to believe. Begin with the slightest possible tension, just enough to keep the tension tool from falling out of the keyway, and maintain the pressure of your finger on the turning tool to about the weight of a penny. The light touch is definitely more desirable than a heavy grip.

Insert the tension tool into the keyway so that it applies turning tension to the plug, being careful not to interfere with the action of the pins. I have had better

WITHDRAW THE PICK SLOWLY, AS YOU COUNT THE PINS.

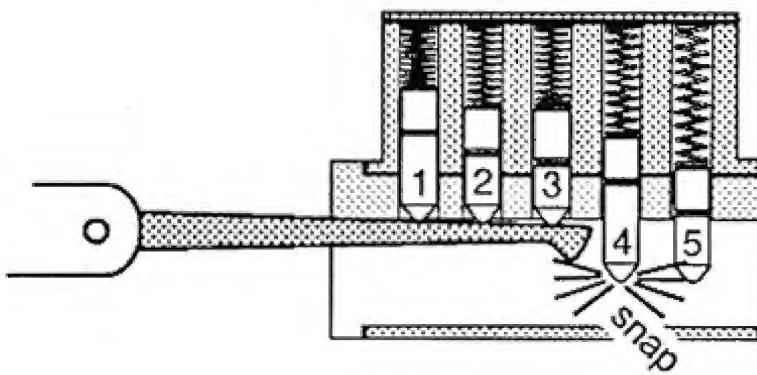


Illustration 5

luck and prefer to work with the tension tool at the top of the keyway in illustration six. This way it will not interfere with the free movement of the pick tools.

Start picking with the diamond rake, rake through all the pins, while applying light turning tension, and any easy pins will pick immediately. After raking the pins, begin to pick through them one at a time, while holding the pick tool lightly with the fingertips, and lift or weigh each pin. If a pin is picked, it will have very little weight and seem to float. If a pin is binding, you will feel it be bound. If you are lifting the pin stack against the top springs pressure, you will be able to feel it.

Make a mental note of which pins are not binding, and come back to them after picking a different pin. Try

to feel which pins are picked, picked pins are weightless and they raise easily and hit at the shear line. Use the tension wrench to feel as you pick and you may feel the picked pins as they allow the plug to turn ever so slightly while maintaining light turning tension.

If you feel that some of the pins are picked, but you can't seem to get others to bind or catch, switch to the hook pick but do not release the turning tension. Hold the picked pins and continue to pick with the hook that is used to raise a short pin behind a longer pin, like pins four and five in illustration five.

Too much tension will defeat your best picking attempts. Notice in illustration seven, that if you apply enough tension to hold a bottom pin above the shear line, you're done

LIGHTEST POSSIBLE TENSION

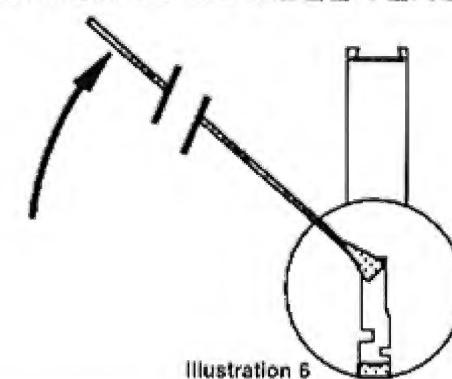


Illustration 6

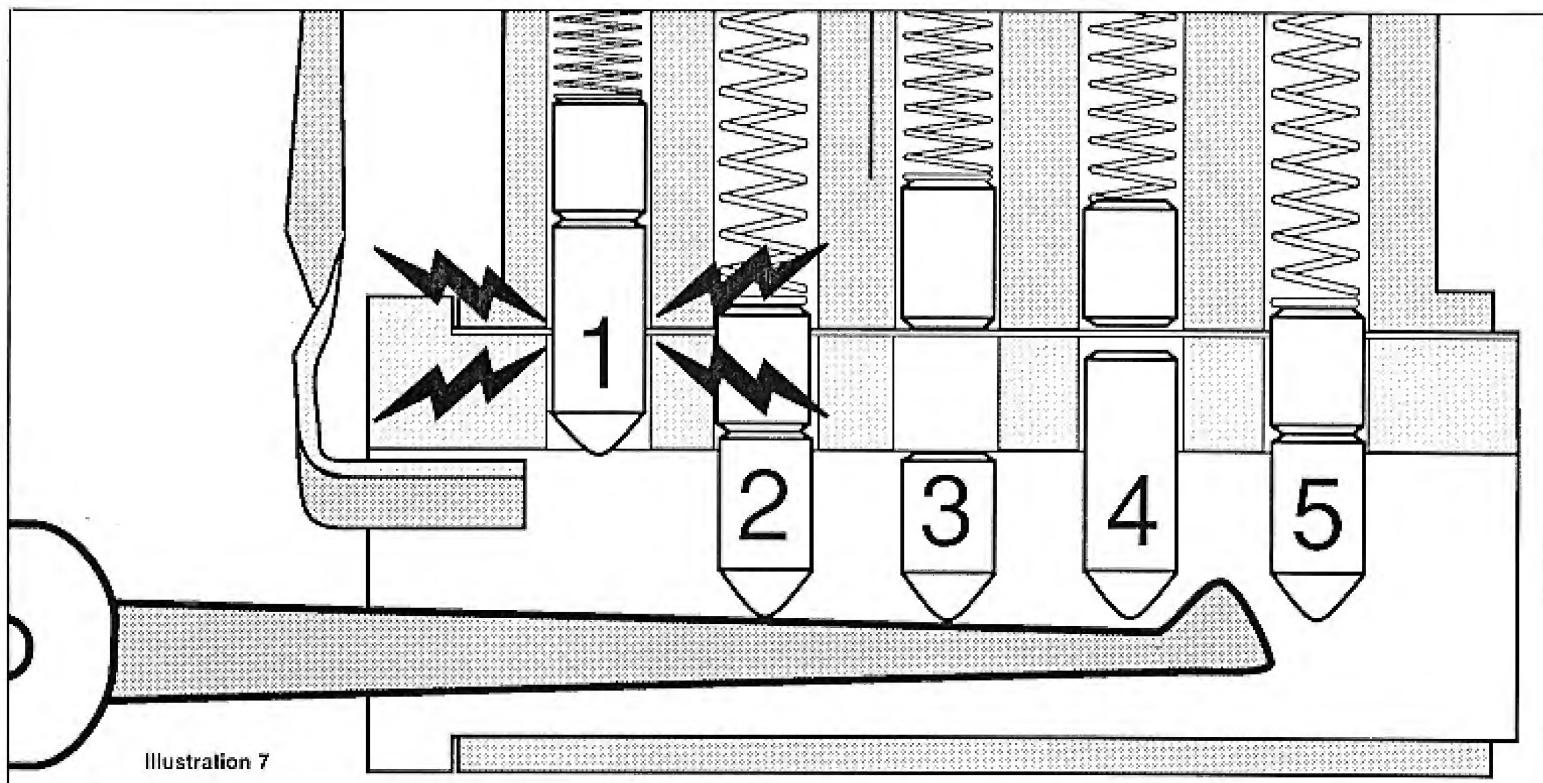


Illustration 7

picking. With pin number one held as you see in the illustration, it is impossible to continue to bind or capture pins at the shear line. Use the pick to gently lift and weight each pin and you should be

able to feel the difference between a pin that is floating because it is picked, binding because it is about to be picked, or spring-loaded because it has not yet begun to bind.

Gentle persuasion is the key and anxious frustration and force lead to failure. You have to learn to hold your mouth right. ■

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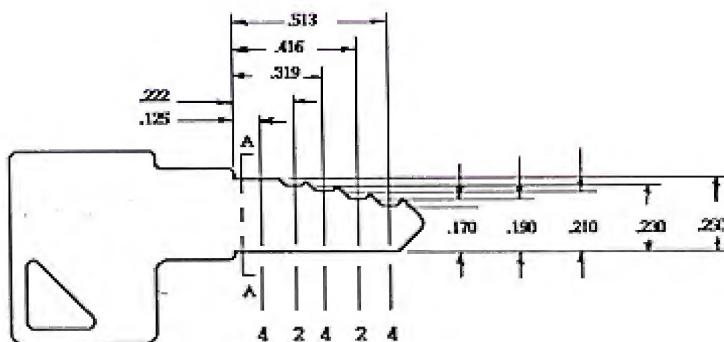
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DEPTHES

0 -	5 -	0.170
1 -	6 -	0.150
2 -	7 -	0.220
3 -	8 -	
4 -	9 -	

KEYWAYS



IN8

TAYLOR L54B
ILCO L1054B



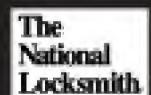
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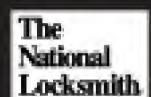
Keyblanks:

Original	WG-2
Ilco	L1054B
Taylor	L54B

Code Machines:

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Codemax No.	1 - 040
DSD Page Ref.	1-16

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23 31345	73 14452	23 31442	73 42453	23 34231
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44 34212	94 41252	44 42344	94 44123	44
45 34213	95 41253	45 42345	95 44131	45
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Shop Talk

Helpful Questions and Answers

Shop Talk answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your locksmith questions to Shop Talk: *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Q: Here is what I got into. I got a call from a local motel. It seems that a key was broken off in a door and no one could get into the room. The guests wanted to check out and be on their way, but could not get into the room to get their luggage. There was just one door to the room and the room was on the second floor. The door was the only way into the room.

The key had been broken off flush with the knob and was turned 180 degrees. This put the pins on the bottom of the keyway and the keyway upside down. I could only turn the plug 3/16" in either direction. Then it was tight as could be. The only thing I could think of was to drill out the Best cylinder, so I went for the retainer. I had a little trouble getting the cylinder assembly out but it finally pulled out. When it did, the end of the knob came with it. It was the piece the cylinder was in, about 1/4" thick and a little bigger than a silver dollar. I put a screwdriver in where the tailpiece went, and opened the door. From there, the maintenance man said he could do the rest.

I would like all the information you can give me as to what to be ready for the next time. This is the only way I could think of to get in. Everyone was in a hurry to get in the room.

Royce Evans
Ohio

A: You seem to have the situation well in hand. You did the only sensible thing you could have given your situation. The symptoms you describe are fairly common. The cause of the problem was most probably a worn cylinder and an inaccurate key. As it is with most cylinders that are mastered, the use of #2 wafers, which are the

thinnest permissible wafer in the standard Best system, and the "duplication" and origination of keys on equipment which is not properly maintained will lead to exactly the problem you describe.

If the key is cut "undersize," there is a possibility that a thin wafer can be forced into the shear line. Thin wafers wear to a sharp flat saucer shape. The edge of the saucer slips into the clearance between the plug and shell. The person holding the key, not knowing why the key suddenly turns hard, turns harder on the key. The wafer is then displaced from the pin stack, and moves around the plug shown in illustration one.

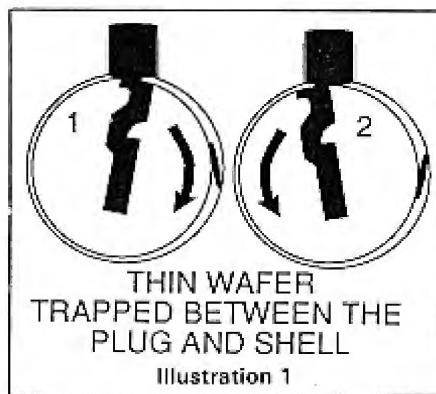


Illustration 1

With the thin wafer in this position, the cylinder is truly jammed. As the key is turned right, as in #1, the wafer rocks as shown, to jam the plug and prevent it from turning further. As the key is turned counterclockwise, as in #2, the wafer rocks the other direction and locks up the plug again.

There is no restoring the cylinder to normal position to remove the key at this point. Lubricate the plug and work with it for a few moments if you like, but the end is near. Wear in the cylinder, lack of periodic maintenance and inaccurate keys has resulted in a dead lock situation requiring that the cylinder be destroyed. If this was a standard cylinder, the solution would be to drill the center of the plug. Drilling for the shear line would be a waste of time. Destroy and remove the plug to access the latch actuator and open the door.

Since your lock was a removable core type lock, the solution was a little cleaner, in that the plug can be removed by a 3/16" hole at the control shear line.

Illustration two shows a Best removable core cylinder. The locking lug, on the left side of the cylinder, is what holds it in place in its various applications. There are two shear lines in removable core cylinders like this. The working shearline is the same as any other lock cylinders. It allows the plug to turn 360 degrees, without restriction, to actuate the lock. The second shear line is the control shear

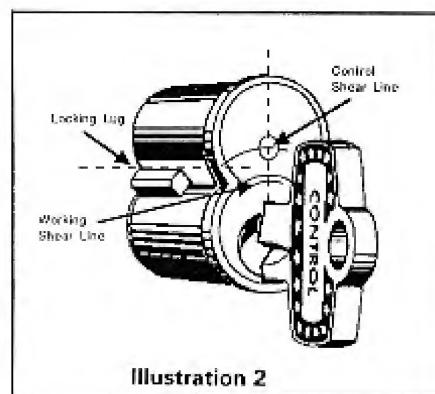


Illustration 2

line. When the pins are aligned to operate at the control shear line, the key will rotate 15 degrees right and stop. This 15 degree rotation is all that is necessary to retract the locking lug or plug retaining lug. Drill a 3/16" hole as you see in the illustration, at the control shear line, and turn the plug with a screwdriver to retract the locking lug then remove the core.

A second solution for this lockout, would have been to remove the lock plug with a mechanical puller or slide hammer. The plug will pull easily since the operating shear line is made by the key. Pull the plug and actuate the lock with a screwdriver. With the plug removed, the remaining pins and springs can be removed and the control lug retracted with a screwdriver or scratch awl to remove the cylinder.

In either case, the cylinder must be replaced. You used the most pro-



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fessional method when you destroyed the cylinder. The fact that the maintenance man took over, suggests that they need a locksmith on call. I read a sign in a lawyer's office that went something like this.

"A man that is his own lawyer, has a fool for a client."

Somehow I feel the same way about companies that try to repair and maintain their own locks. Locksmithing requires service by a qualified individual, not a maintenance man. Master key systems cannot be well maintained by mail order. 06

Q: I was called upon to unlock the trunk on a 1986 Pontiac Grand Am. The customer had broken the key and tried to remove it, thus breaking the shuttle and springs. I tried for about one hour with no success, so I removed the two torx bolts and removed the back seat.

Behind the top cushion there is a thick cardboard and lining that covers the entire top and back of the cushion. The customer did not want to cut through the cardboard, so I drilled the lock out and installed a new one.

There is also a partition in the back of the trunk covered with a thick lining. I looked around to see if I could remove that cardboard enough to insert a rod, but couldn't find any. I could appreciate some information on opening the 1986 Pontiac Grand Am, especially the trunk by way of the back seat.

Louis Taylor
Louisiana

A: After reading your letter, I began to reminisce about locksmithing during the 1950's and 1960's. In those days, I was always pulling back seats to open a trunk until it became common to find a solid wall behind the seats. It was a situation that forced us to learn other opening methods.

With today's model cars, it is neither practical nor economically feasible to go through the backseat. It is time to educate yourself on current techniques. Replacement locks are so reasonable for you to purchase for resale that you shouldn't be passing up that avenue of profit. Besides, you don't even have to get all dirty and cut up like you do going through a back seat.

If you don't have a lock with you, it would still be better to extract the lock you referred to. Open the trunk by inserting a screwdriver into the latch unit where the cam of the lock had been

and turn it. Give your customer a business card showing your location and have them drive to your shop and then replace the unit.

Most any of the wholesalers have tools available that will suck the lock out in a matter of minutes with no problems or messes. You can also suck out the unit using a nose puller that we use on safe deposit boxes. I think one of these tools has it all over drilling the lock out. However, drilling still remains a good alternative. 02

Q: I am having trouble identifying vending locks for washers and dryers manufactured by Greenwald Industries, "Ultra Guard." The keyway is shown in illustration three. Written on the sticker



Illustration 3

inside was "Code-CGI101200." I couldn't find this in any code books.

Can you help me? What key does this lock take? Is it a restricted keyway? Are keys available for this lock through normal suppliers?

I would appreciate any information and advice you may offer.

Bill Frase
Delaware

A: This is a good question, Bill, and our answer may be helpful to others who may encounter a similar situation. Greenwald Industries uses different types of locks in their washer dryer configurations and the code number CG 101200 indicates that this is a Medeco Lock.

You won't find the code because it is restricted. Blanks are not available through your distributor. The owner of the equipment can get additional keys by writing to Greenwald Industries, 1340 Metropolitan Ave., Brooklyn, NY 11237. Proper identification and the code number are required for this service. 03

Q: I am confused about the Ford 10 tumbler system. My code book indicates there are six cuts for the ignition and four cuts for the door. Is this correct or are there common cuts in the ignition and door for the key to properly operate both locks? The All Lock replacement

ignition locks that I have in stock have key cuts in the number 1, 2, 3, 4 and 6 positions with the number 5 position left blank.

I recently had a Ford Aerostar Van where the owner's key would no longer work in the ignition. Not knowing how the 10 tumbler replacement ignition would match up with the existing door locks, I took the easy way out and used a 5 pin tumber All Lock 1408 replacement.

Although the owner needs to use his original key for the doors and the replacement key for the ignition, he is happy with the outcome. I myself, am not happy and would like to know the correct way to approach this the next time I run into the this problem.

Larry Johnson
Wisconsin

A: Welcome, Larry, to the ranks of confused locksmiths regarding the so called '84 ½ Ford locks. Many pages have been written about these locks and there isn't enough space allotted to a *Shop Talk* answer to go into a lot of detail but I will try to summarize the 10 cut for you.

First, you, and many others refer to this as a 10 tumbler or 10 bit lock.

There are, as you know, 10 cuts on the key, but there are only six wafers in the locks, door or ignition. All codes are from tip to bow with the ignition code utilizing cuts 1 2 3 4 5 6 and the door codes utilizing cuts 5 6 7 8 9 10.

When these locks were first introduced the only way to replace the ignition and still have one key was to also replace the door locks. These were available as matched sets and of course, required a lot of work and expense to give the owner one key. Someone, somewhere in the dark corners of lock technology, did a lot of study and came up with an answer that would allow the replacement of the ignition lock and still keep the same door locks.

Since cut positions 5 and 6 are common to both locks, door and ignition, the answer was rather obvious, manufacture a replacement ignition lock but leave the tumbler out of the fifth cut position. This explains why your All Lock replacements, as well as Ford and B&S have cuts in position 1 2 3 4 & 6. Actually, these are now five tumbler locks. But what about the sixth position.

Well, if you will get your 84½ Ford codes out you may be able to follow this explanation a little easier. All of the codes have three numbers, a letter

and three numbers. The letter indicates the cut for the sixth position (from the tip). Look at the codes, an "A" shows a 1 cut in the sixth position. "B" is a 2 cut, "C" is a 3 cut, "D" is a 4 cut and "E" is a 5 cut. These cuts are common to the door and ignition.

To replace the ignition you must determine the cut that is in the sixth position of the customer's key, by measuring that cut on the key or from the code if it is available. If the cut is a three or the code has a "C" you then need an ignition lock with a "C" in the code number. Two keys come with the replacement ignition, these keys, as you have noted have cuts in positions 1 2 3 4 and 6.

Now, make cuts 7 8 9 and 10 on these keys by duplicating from the customer's original key or by code machine and you will have keys common to both locks. There are methods to solve other problems arising with the '84½ locks but you must first have a thorough understanding of the coding system and how it relates to the fifth and sixth positions and what the letter in the code tells you.

If your customer is happy with how you handled the situation, I guess we can't fuss too much about it, but you



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really should take some time to learn about the '84½, there are more and more of them hitting the streets every day. Thanks for writing to *Shop Talk*, Larry, and I do hope that this brief explanation gets you going on some serious study. 03

Q: In reference to the Norwalk key that looks like a Ford blank, these were rather popular in the Northeast section of the United States a long time ago. All that I have seen were for sectional handle mortise locks.

I have not seen any blanks in the last 20 years. We have an old cylinder here to which we made a key by milling down a Ford blank, since it is thinner and has a different offset, it does not fit well. We also made one by brazing two halves of a flat brass safe deposit key together, then overlapping them in the middle. The head is funny looking but the key fits better.

The main problem with all of these I have seen, is that the cylinder is oversized, but not as big as a jumbo cylinder. We had a machinist make reducer rings for us and we extended some tailpieces and just replaced them when necessary.

Harry H. Printz
New Jersey

Q: Please help me with a car ignition. A customer brought me the ignition with a 1924 Dodge car and I have not been able to find a key blank for it. Possibly the #DB90 imprinted on the ignition is a code. Does any one know where I would find a key blank a code?

An help you can give me will be appreciated. A rough diagram is enclosed.

R. Feuillatre
Canada

A: Hey, Ray, your artistry is not all that bad. Looks just like the ignition in the old family Dodge when I was a kid. The DB90 is not exactly a code, it is the key number.

The DB, of course, is for Dodge Brothers. These were stamped keys made by Clum and I believe there were 36 of them DB76-DB99. These were available from most hardware stores or from a dealer for about two bits. The enclosed sketch shows what your DB90 should look like.

I suggest that you contact: Wayne Finney, the key shop, 144 Crescent Dr., Akron, OH 44301 for a possible reproduction of this key.

Thanks for the drawing, Ray, it brought back some memories.



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Letters

Continued from page 8

Sizing up the door, he saw it was steel clad with a frosted glass in it, a door closer at the top and three hinges holding it to the steel casing. He had no tools with him, not even a pocket knife, so he tried the hinge pins with his fingers. The middle pin, after a few kicks of his foot, came out, but the other two were really stuck tight. The window frame was fastened in with Phillips screws so outside of breaking it, there was no help there.

Using his locksmith trained brain and a lot of common sense, he whipped off his belt and using the buckle as a chisel point and his shoe heel as a hammer, the other two doorknobs came out. The door closer had a $\frac{1}{2}$ " pin on the knee joint secured with cotter pins. By sticking the belt buckle retaining tongue through the eye of the cotter pin, he was able to pull it out and disassemble the closer. There was just enough room, at the bottom of the door, to slip the buckle and belt under and slide to the hinged side. By pulling on the belt, the door hinges came off and Sigmund was out.

He got his tools and took the lock apart and inside it a piece of the worn lock had broken off and fallen down. It was jammed as if it was welded. By contacting the right people, he was able to replace the lock at a nice profit even though he had stayed 15 minutes longer in the lavatory than he planned.

Needless, to say, even though suspenders are popular, I will always wear a belt. Female locksmiths should also wear a belt on the job.

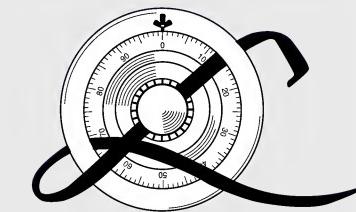
Chester Jonason
Washington

Guest Editorial

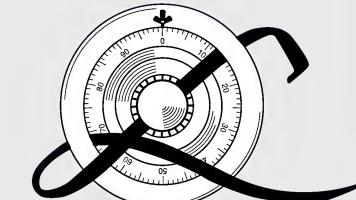
Continued from page 10

administering the program.

"Investigations" and "files" are cited as an invasion of privacy. The "investigation" is a matter of accessing a computer to see if there is a criminal record and if there is not, then that is the end of it, or if there is, then the "file" on the person already existed. This is the same procedure someone must go through to purchase a hand gun in many states. *Continued on next page*



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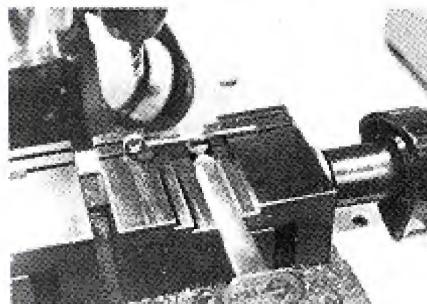
This is a sensitive subject in the locksmith industry with licensing and regulation being inevitable especially at the state level for locksmiths, and this federal bill is merely one way to address a problem which will not go away. I encourage readers to respond by writing to ALOA directly voicing their opinions, member and non-member alike.

This issue is raised for the debate purpose and don't just dismiss this proposal because of the misguided notions that "all regulation is bad" or "the government will have its hand in my pocket" or "the government can't do anything right." ■

Laserpoint

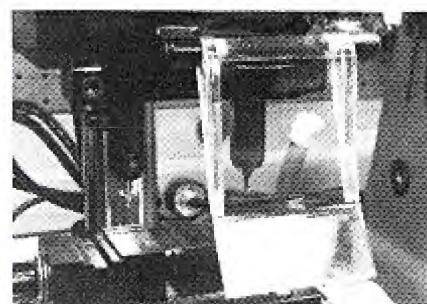
Continued from page 32
hold the Valet key blank.

Tip stops are used to properly position the keys in the vises (*see photograph 14*) and all milling is done from tip to bow. We particularly like the lock on



14. Tip stops properly position the keys in the vises.

the X axis which permits milling of straight slots in a blank when occasioned. The built-in work light is standard rather than being an option as on some machines, and the flip-down clear plastic shield (*see photograph 15*) allows unobstructed vision of the cutting operation.



15. The flip-down plastic shield allows unobstructed vision of the cutting operation.

The motor and drive belt appear to be designed for long trouble-free service and all traverse rods have "O" ring bumpers on each end to cushion any shock between the carrying block and the pillow blocks. (*See photograph 16.*)



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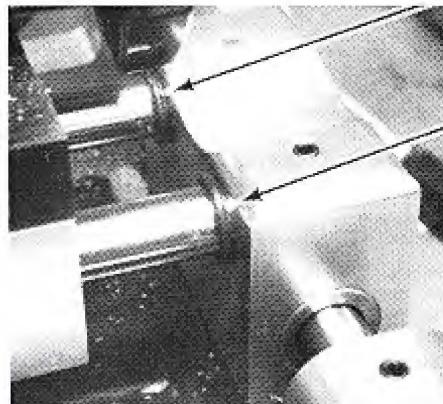
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16. "O" ring bumpers cushion any shock between carrying and pillow blocks.

We found the Laserpoint LPA 100 to be a nice machine to use in all types of milling/drilling operations and feel that it certainly deserves a close look in your selection of duplicating equipment for high security type keys.

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Legends

Continued from page 60

as well as passengers. Pilots always seem to blame an airline other than their own for the mishap and passengers usually tinge the tale with criticism for a particular airline's ineptitude, ending with some statement of reluctance to fly with that company again.

Interestingly enough, even the news media picked up on this legend. A columnist in Seattle, Washington found it entertaining and repeated it without establishing its authenticity by headlining "Next Time You Fly, Make Sure the Pilot Has an Ax."

Perhaps we should apply for crew positions on commercial airlines. Sounds like they could use a good locksmith aboard.

Another small example of the folklore phenomenon is the mythical merchant down the street that charges less than you do. You know what I mean.

"\$10! Why, I can get this down the street for six," someone says.

A man came into our shop recently to have a key duplicated.

"How much?" he asked Ted, our part-time, retired PhD employee.

"\$1.10, plus tax," Ted said.

"A \$1.10!" the man shouted. "Why, I could have gotten this made down the street for 89 cents, but they didn't have the right blank."

The soul of solemnity, Ted replied, "We'd only charge 89 cents too, if we didn't have the right blank."

No joke! ■



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